

State of California  
The Resources Agency

DEPARTMENT OF WATER RESOURCES  
Division of Operations and Maintenance

# STATE WATER PROJECT OPERATIONS DATA

For the month of:  
**December 1999**

**Gray Davis**  
Governor  
State of California

**Mary D. Nichols**  
Secretary for Resources  
The Resources Agency

**Thomas M. Hannigan**  
Director  
Department of Water Resource

State of California  
Resources Agency

**Department of Water Resources  
Division of Operations and Maintenance**

**State Water Project  
Operations Data**

for the Month of December 1999

## **Table of Contents**

### **Monthly Highlights**

#### **Oroville Field Division Water Operations**

**Table**

- 1 Antelope Lake, Daily Operation
- 2 Frenchman Lake, Daily Operation
- 3 Lake Davis, Daily Operation
- 4 Lake Oroville, Daily Operation
- 5 Thermalito Forebay, Including Diversion Pool and Power Canal, Daily Operation
- 6 Thermalito Afterbay, Daily Operation
- 7 Oroville-Thermalito Complex, Water Temperature Data

#### **Delta Field Division Water Operations**

**Table**

- 8 Aqueduct Operation, Delta Field Division
- 9 Delta Field Division Plant Data
- 10 Clifton Court Forebay, Daily Operation of Gates
- 11 Governor Edmund G. Brown California Aqueduct, Delta Field Division, Monthly Deliveries
- 12 South Bay Aqueduct, Delta Field Division, Monthly Deliveries
- 13 Lake Del Valle, Daily Operation

#### **San Luis Field Division Water Operations**

**Table**

- 14 Consolidated State-Federal O'Neill Forebay, Daily Operations
- 15 Consolidated State-Federal San Luis Reservoir, Daily Operations
- 16 San Luis Field Division Plant Data
- 17 Consolidated State-Federal Los Banos Reservoir, Daily Operations
- 18 Consolidated State-Federal Little Panoche Reservoir, Daily Operations
- 19a Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 19b Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 20 Consolidated State-Federal San Luis Canal, Daily Operations

#### **San Joaquin Field Division Water Operations**

**Table**

- 21 San Joaquin Field Division Plant Data
- 22a Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22b Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22c Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 23 Coastal Branch Aqueduct, San Joaquin Field Division, Monthly Deliveries

## **Southern Field Division Water Operations**

### **Table**

- 24 Southern Field Division Plant Data
- 25 Pyramid Lake, Daily Operation
- 26 Elderberry Forebay, Daily Operation
- 27 Castaic Lake, Daily Operation
- 28 Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (West Branch)
- 29 Silverwood Lake, Daily Operation
- 30 Lake Perris, Daily Operation
- 31a Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)
- 31b Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)

## **Water Quality Operations**

### **Table**

- 32 Water Quality at Selected SWP Locations
- 33 Water Quality at Selected Delta Stations
- 34 Pesticides, Herbicides, and Other Organic Substances Detected in the SWP

## **Energy Operations**

### **Table**

- 35 Oroville and Delta Field Divisions Energy Data
- 36 San Luis Field Division Energy Data
- 37 San Joaquin Field Division Pumping Plant Energy Load Data
- 38 Southern Field Division Energy Data

## **MONTHLY HIGHLIGHTS**

The following highlights are activities or actions that impacted State Water Project operations during the month of December 1999.

Seasonal (since October 1) precipitation in the northern Sierra was near average on December 1 after a normal November. At that time estimated statewide precipitation stood at 70 percent, with a strong north to south gradient characteristic of La Niña years. December was very dry over the entire State. Northern Sierra precipitation amounted to about 1.5 inches compared to an average of 8.4 inches. Accumulated precipitation, as of December 31, was about 11 inches, 62 percent of average for the date. Last year, we had 19 inches, which was 107 percent of normal. The water year ended up at 110 percent, while the statewide estimate was 95 percent.

Snowpack accumulation was far behind in December. Normally, by the end of December, the snowpack holds 40 to 45 percent of the water content of the April 1 snowpack. This year the snowpack was 10 percent of the April 1 average and 20 to 25 percent of the December 31 average statewide.

Runoff during December reflected the dry conditions and was severely below normal, about one-third of average. Runoff so far this season is about half of the average compared to average one year ago.

Currently statewide storage still stands at about 110 percent of average for the date. This is 15 percent less than last year. Storage at San Luis Reservoir, which held just under 1.2 MAF at the end of the December, is about 85 percent of average. On December 31, total storage in major SWP reservoirs was about 3.6 MAF, compared with 4.4 MAF at this time in 1998. Average storage in the major SWP reservoirs on December 31 is about 3.7 MAF. Storage in Lake Oroville was about 2.2 MAF, compared to 2.7 MAF at this time last year. The State's share of San Luis Reservoir storage was about 717 TAF, as compared with 1.07 MAF at this time last year. On December 31, the combined storage in our southern reservoirs was about 625 TAF, compared with 628 TAF at this time last year.

Through December, SWP water deliveries for 1999 were about 2.96 MAF. This is a combination of project, transfer, and exchange waters. This is 1.14 MAF more than delivered during the same period in 1998.

On December 9, balanced conditions were declared in the Delta. Conditions had been in excess since November 9.

East Branch flow test was successfully performed from December 8, 00:01 hours to December 15, 11:05 hours. The test, requested by the Metropolitan Water District of Southern California, was to verify data taken during last year's flow test and to test operational capability of the East Branch. Target flow of the test was 2,010 cfs at Pearblossom Pumping Plant. The test was a two phase test -- "steady state" portion with no gate or flow changes and an operational portion allowing flow and gate changes to maintain the target flow at Pearblossom.

On November 26, the Delta Cross Channel gates were closed to protect out-migrating spring-run chinook yearlings. The closure, coupled with high exports and low outflow conditions, exacerbated water quality conditions in the interior Delta. Initially, the increasing salinity was not viewed as a major concern because a significant reduction in exports was scheduled to begin shortly after the gates were closed. Unfortunately, the export reduction was delayed; by December 6, interior Delta salinity had reached the recommended level for opening the DCC gates. On December 8, the CALFED Ops Group met and reviewed recommended actions. When the DCC gates were not opened, the CVP and SWP reduced exports on December 10 and releases to the Feather River were increased in an effort to improve water quality conditions. Exports were again reduced on December 13 to further improve water quality. Finally, the DCC gates were opened on December 14 and remained that way through the rest of December.

On December 20, the water quality standard of 250 mg/l chlorides at Contra Costa Pumping Plant #1 was exceeded. CVP and SWP exports remained at 1,600 cfs through December 22. By the end of the month, the CVP and SWP pumping had been ramped up to over 10,000 cfs.

**Table 1. Antelope Lake**

Daily Operation  
(in acre-feet except as noted)

Capacity: 22,566 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Nov 30	4994.73	16,375									
1	4994.72	16,367	-8	20	0	0	0				
2	4994.69	16,344	-23	20	0	0	0				
3	4994.65	16,313	-31	20	0	0	0				
4	4994.59	16,267	-46	20	0	0	0				
5	4994.56	16,244	-23	20	0	0	0				
6	4994.52	16,214	-30	20	0	0	0				
7	4994.49	16,191	-23	20	0	0	0				
8	4994.44	16,152	-39	20	0	0	0				
9	4994.42	16,137	-15	20	0	0	0				
10	4994.37	16,099	-38	20	0	0	0				
11	4994.34	16,076	-23	20	0	0	0				
12	4994.31	16,053	-23	20	0	0	0				
13	4994.28	16,030	-23	20	0	0	0				
14	4994.24	16,000	-30	20	0	0	0				
15	4994.21	15,977	-23	20	0	0	0				
16	4994.16	15,939	-38	20	0	0	0				
17	4994.13	15,916	-23	20	0	0	0				
18	4994.08	15,878	-38	20	0	0	0				
19	4994.04	15,848	-30	20		0	0				
20	4994.01	15,825	-23	20	0	0	0				
21	4993.96	15,788	-37	20	0	0	0				
22	4993.92	15,758	-30	20	0	0	0				
23	4993.88	15,727	-31	20	0	0	0				
24	4993.83	15,690	-37	20	0	0	0				
25	4993.78	15,652	-38	20	0	0	0				
26	4993.74	15,622	-30	20	0	0	0				
27	4993.72	15,607	-15	20	0	0	0				
28	4993.67	15,570	-37	20	0	0	0				
29	4993.62	15,533	-37	20	0	0	0				
30	4993.57	15,495	-38	20	0	0	0				
31	4993.56	15,488	-7	20	0	0	0				
Total cfs-days				---	620	0	0	0	42	662	215
Total ac-ft				-887	1,230	0	0	0	83	1,313	426

1/ Values not available on a daily basis.

**Table 2. Frenchman Lake**

## Daily Operation (in acre-feet except as noted)

Capacity: 55,477 ac-ft

December 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Nov 30	5578.80	42,097									
1	5578.79	42,084	-13	2	0	0	0				
2	5578.83	42,137	53	2	0	0	0				
3	5578.82	42,124	-13	2	0	0	0				
4	5578.77	42,057	-67	2	0	0	0				
5	5578.78	42,070	13	2	0	0	0				
6	5578.78	42,070	0	2	0	0	0				
7	5578.79	42,084	14	2	0	0	0				
8	5578.79	42,084	0	2	0	0	0				
9	5578.80	42,097	13	2	0	0	0				
10	5578.82	42,124	27	2	0	0	0				
11	5578.81	42,110	-14	2	0	0	0				
12	5578.82	42,124	14	2	0	0	0				
13	5578.81	42,110	-14	2	0	0	0				
14	5578.83	42,137	27	2	0	0	0				
15	5578.80	42,097	-40	2	0	0	0				
16	5578.83	42,137	40	2	0	0	0				
17	5578.84	42,150	13	2	0	0	0				
18	5578.85	42,164	14	2	0	0	0				
19	5578.84	42,150	-14	2	0	0	0				
20	5578.83	42,137	-13	2	0	0	0				
21	5578.85	42,164	27	2	0	0	0				
22	5578.85	42,164	0	2	0	0	0				
23	5578.84	42,150	-14	2	0	0	0				
24	5578.83	42,137	-13	2	0	0	0				
25	5578.83	42,137	0	2	0	0	0				
26	5578.89	42,217	80	2	0	0	0				
27	5578.85	42,164	-53	2	0	0	0				
28	5578.88	42,204	40	2	0	0	0				
29	5578.88	42,204	0	2	0	0	0				
30	5578.88	42,204	0	2	0	0	0				
31	5578.92	42,257	53	2	0	0	0				
Total cfs-days				---	62	0	0	0	74	136	217
Total ac-ft				160	123	0	0	0	147	270	430

1/ Values not available on a daily basis.

**Table 3. Lake Davis**

## Daily Operation

(in acre-feet except as noted)

Capacity: 84,371 ac-ft

December 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Nov 30	5767.23	56,195									
1	5767.23	56,195	0	23	0	0	0				
2	5767.21	56,131	-64	23	0	0	0				
3	5767.20	56,098	-33	23	0	0	0				
4	5767.18	56,034	-64	23	0	0	0				
5	5767.17	56,002	-32	23	0	0	0				
6	5767.15	55,938	-64	23	0	0	0				
7	5767.13	55,874	-64	23	0	0	0				
8	5767.11	55,810	-64	23	0	0	0				
9	5767.09	55,745	-65	23	0	0	0				
10	5767.09	55,745	0	23	0	0	0				
11	5767.08	55,713	-32	23	0	0	0				
12	5767.06	55,649	-64	23	0	0	0				
13	5767.07	55,681	32	23	0	0	0				
14	5767.05	55,617	-64	23	0	0	0				
15	5767.04	55,585	-32	14	0	0	0				
16	5767.04	55,585	0	25	0	0	0				
17	5766.99	55,426	-159	44	0	0	0				
18	5766.99	55,426	0	23	0	0	0				
19	5766.98	55,394	-32	23	0	0	0				
20	5766.97	55,362	-32	23	0	0	0				
21	5766.96	55,330	-32	23	0	0	0				
22	5766.94	55,266	-64	23	0	0	0				
23	5766.92	55,202	-64	23	0	0	0				
24	5766.90	55,139	-63	23	0	0	0				
25	5766.88	55,075	-64	23	0	0	0				
26	5766.87	55,043	-32	23	0	0	0				
27	5766.84	54,948	-95	23	0	0	0				
28	5766.83	54,916	-32	23	0	0	0				
29	5766.82	54,884	-32	14	0	0	0				
30	5766.82	54,884	0	10	0	0	0				
31	5766.81	54,853	-31	10	0	0	0				
Total cfs-days				---	692	0	0	0	177	869	192
Total ac-ft				-1,342	1,373	0	0	0	351	1,724	382

1/ Values not available on a daily basis.

**Table 4. Lake Oroville**

Daily Operation

(in acre-feet except as noted)

Capacity: 3,537,580 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow					Inflow	
				Hyatt Powerplant Generation 1/	Palermo Canal	Evaporation 2/	Spill	Total Outflow	Hyatt Powerplant Pumpback	Computed Inflow 3/
Nov 30	808.39	2,287,827								
1	808.21	2,285,736	-2,091	10,348	6	0	0	10,354	0	8,263
2	808.03	2,283,645	-2,091	9,574	6	40	0	9,620	0	7,529
3	807.59	2,278,541	-5,104	10,836	6	40	0	10,882	0	5,778
4	807.65	2,279,236	695	6,561	6	72	0	6,639	0	7,334
5	808.11	2,284,574	5,338	1,709	6	32	0	1,747	0	7,085
6	807.84	2,281,440	-3,134	9,138	6	40	0	9,184	0	6,050
7	807.65	2,279,236	-2,204	9,003	6	40	0	9,049	0	6,845
8	807.40	2,276,339	-2,897	9,618	6	32	0	9,656	953	5,806
9	807.40	2,276,339	0	9,032	6	48	0	9,086	1,960	7,126
10	807.36	2,275,876	-463	8,573	6	56	0	8,635	1,865	6,307
11	817.32	2,275,413	-463	9,596	6	80	0	9,682	2,523	6,696
12	808.06	2,283,993	8,580	407	6	32	0	445	2,701	6,324
13	807.56	2,278,193	-5,800	12,226	6	48	0	12,280	0	6,480
14	807.06	2,272,403	-5,790	9,439	6	40	0	9,485	0	3,695
15	806.91	2,270,668	-1,735	7,261	6	64	0	7,331	0	5,596
16	806.67	2,267,893	-2,775	7,247	6	16	0	7,269	0	4,494
17	806.71	2,268,356	463	4,537	7	24	0	4,568	0	5,031
18	806.34	2,264,083	-4,273	8,297	7	0	0	8,304	0	4,031
19	806.64	2,267,547	3,464	2,260	7	64	0	2,331	0	5,795
20	806.08	2,261,084	-6,463	10,046	7	136	0	10,189	0	3,726
21	805.88	2,258,779	-2,305	9,985	7	135	0	10,127	0	7,822
22	805.10	2,249,805	-8,974	12,834	7	215	0	13,056	0	4,082
23	804.28	2,240,397	-9,408	14,811	7	40	0	14,858	0	5,450
24	803.50	2,231,474	-8,923	13,696	7	40	0	13,743	0	4,820
25	803.41	2,230,446	-1,028	5,864	7	16	0	5,887	0	4,859
26	803.72	2,233,989	3,543	2,806	6	39	0	2,851	0	6,394
27	802.83	2,223,830	-10,159	13,242	6	32	0	13,280	0	3,121
28	802.19	2,216,544	-7,286	12,112	6	55	0	12,173	0	4,887
29	801.04	2,203,496	-13,048	16,440	6	71	0	16,517	0	3,469
30	799.92	2,190,840	-12,656	16,236	6	47	0	16,289	0	3,633
31	799.52	2,186,332	-4,508	8,734	6	47	0	8,787	0	4,279
Total				-101,495	282,468	195	1,641	0	284,304	10,002
										172,807

1/ Includes bypass flows

2/ Evaporation will be zero for days when there is precipitation or heavy overcast.

3/ Does not include pumpback.

**Table 5. Thermalito Forebay  
Including Diversion Pool and Power Canal**

Capacity: 25,120 ac-ft

Daily Operation  
(in acre-feet except as noted)

**December 1999**

Date	Storage 1/	Storage Change	Inflow			Outflow					Losses (-) And Gains (+)
			Lake Oroville Releases 2/	Kelly Ridge Generation	Thermalito Pumping- Generating Plant Pumpback	Thermalito Pumping- Generating Plant Generation 3/	Butte County	Thermalito Irrigation District	Releases To River 4/	Hyatt Powerplant Pumpback	
Nov 30	23,254										
1	23,346	92	10,348	294	0	9,552	0	3	1,273	0	278
2	22,846	-500	9,574	377	0	9,319	0	3	1,265	0	136
3	22,997	151	10,836	381	0	9,819	0	3	1,257	0	13
4	24,078	1,081	6,561	248	0	4,586	0	3	1,257	0	118
5	23,438	-640	1,709	248	0	1,398	0	3	1,243	0	47
6	23,214	-224	9,138	244	0	8,505	0	3	1,253	0	155
7	23,208	-6	9,003	244	0	8,082	0	3	1,265	0	97
8	23,354	146	9,618	234	1,677	9,274	0	3	1,249	953	96
9	23,789	435	9,032	228	1,716	7,571	0	3	1,257	1,960	250
10	24,309	520	8,573	228	1,911	7,101	0	3	1,243	1,865	20
11	24,075	-234	9,596	234	2,201	8,622	0	3	1,245	2,523	128
12	23,863	-212	407	210	3,572	443	0	3	1,241	2,701	-13
13	23,492	-371	12,226	147	0	11,678	0	3	1,251	0	188
14	23,438	-54	9,439	272	0	8,677	0	3	1,245	0	160
15	23,730	292	7,261	296	0	6,164	0	3	1,249	0	151
16	23,857	127	7,247	296	0	6,204	0	3	1,271	0	62
17	23,760	-97	4,537	300	0	3,700	0	3	1,249	0	18
18	23,915	155	8,297	163	0	7,144	0	3	1,253	0	95
19	23,752	-163	2,260	142	0	1,343	0	3	1,239	0	20
20	23,812	60	10,046	144	0	9,131	0	3	1,237	0	241
21	23,508	-304	9,985	146	0	9,224	0	4	1,247	0	40
22	23,363	-145	12,834	96	0	12,010	0	4	1,237	0	176
23	23,557	194	14,811	94	0	13,797	0	4	1,239	0	329
24	23,514	-43	13,696	140	0	12,844	0	4	1,245	0	214
25	23,839	325	5,864	150	0	5,110	0	4	1,241	0	666
26	23,198	-641	2,806	152	0	1,891	0	4	1,243	0	-461
27	23,873	675	13,242	149	0	11,655	0	4	1,247	0	190
28	23,271	-602	12,112	153	0	11,789	0	4	1,247	0	173
29	23,375	104	16,440	150	0	15,503	1	4	1,253	0	275
30	22,956	-419	16,236	150	0	15,745	1	4	1,251	0	196
31	21,824	-1,132	8,734	150	0	8,855	1	4	1,247	0	91
Total		-1,430	282,468	6,460	11,077	256,736	3	104	38,739	10,002	4,149

1/ Sum of Thermalito Forebay and Diversion Pool.

3/ Includes Bypass flows at Thermalito.

2/ Sum of releases from Lake Oroville through Hyatt plant, spill, and spillway leakage.

4/ The sum of the flows from fish barrier dam and the fish hatchery.

**Table 6. Thermalito Afterbay**

## Daily Operation

(in acre-feet except as noted)

Capacity: 57,040 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow					Losses (-) and Gains (+)	Total Releases to River 2/	
				Thermalito Pumping-Generating Plant Generation 1/	Sutter Butte Canal	Western Canal Lateral	Richvale Canal	Western Canal	Afterbay River Outlet	Thermalito Pumping-Generating Plant Pumpback			
Nov 30	131.19	36,221											
1	132.22	39,925	3,704	9,552	1,028	37	615	842	3,253	0	-73	4,526	
2	133.15	43,414	3,489	9,319	1,030	26	613	842	3,253	0	-66	4,518	
3	134.19	47,472	4,058	9,819	1,028	10	635	869	3,253	0	34	4,510	
4	133.93	46,444	-1,028	4,586	1,024	10	642	889	3,253	0	204	4,510	
5	132.84	42,236	-4,208	1,398	1,026	10	642	889	3,253	0	214	4,496	
6	133.58	45,073	2,837	8,505	1,029	10	642	891	3,253	0	157	4,506	
7	134.16	47,353	2,280	8,082	1,028	10	642	853	3,253	0	-16	4,518	
8	134.56	48,952	1,599	9,274	1,029	10	642	831	3,471	1,677	-15	4,720	
9	134.44	48,470	-482	7,571	1,002	10	589	831	4,007	1,716	102	5,264	
10	133.64	45,306	-3,164	7,101	990	8	562	813	5,772	1,911	-209	7,015	
11	133.17	43,490	-1,816	8,622	988	6	562	788	5,772	2,201	-121	7,017	
12	130.05	32,318	-11,172	443	986	6	561	788	5,752	3,572	50	6,993	
13	130.92	35,277	2,959	11,678	994	6	565	791	5,772	0	-591	7,023	
14	131.11	35,940	663	8,677	962	12	512	791	5,772	0	35	7,017	
15	130.54	33,970	-1,970	6,164	948	16	482	788	5,772	0	-128	7,021	
16	130.03	32,251	-1,719	6,204	948	12	482	788	5,772	0	79	7,043	
17	128.71	28,000	-4,251	3,700	948	10	488	788	5,772	0	55	7,021	
18	128.28	26,676	-1,324	7,144	952	9	486	788	5,772	0	-461	7,025	
19	125.95	20,039	-6,637	1,343	944	10	484	787	5,772	0	17	7,011	
20	126.35	21,114	1,075	9,131	950	10	486	789	5,752	0	-69	6,989	
21	126.75	22,216	1,102	9,224	952	10	508	789	5,752	0	-111	6,999	
22	128.02	25,891	3,675	12,010	950	10	532	791	5,772	0	-280	7,009	
23	129.83	31,589	5,698	13,797	952	11	536	766	5,772	0	-62	7,011	
24	131.20	36,256	4,667	12,844	952	10	536	750	5,772	0	-157	7,017	
25	130.30	33,156	-3,100	5,110	950	11	534	750	5,752	0	-213	6,993	
26	128.41	27,073	-6,083	1,891	944	10	534	748	5,752	0	14	6,995	
27	129.50	30,510	3,437	11,655	952	10	538	750	5,772	0	-196	7,019	
28	130.61	34,209	3,699	11,789	954	10	536	750	5,772	0	-68	7,019	
29	132.61	41,372	7,163	15,503	954	11	534	750	5,772	0	-319	7,025	
30	134.49	48,671	7,299	15,745	956	11	536	750	5,752	0	-441	7,003	
31	134.65	49,315	644	8,855	950	11	534	750	5,752	0	-214	6,999	
Total				13,094	256,736	30,300	353	17,190	24,780	157,093	11,077	-2,849	195,832

1/ Includes Bypass flows at Thermalito.

2/ The sum of the flows from the fish barrier dam, fish hatchery, and afterbay river outlet.

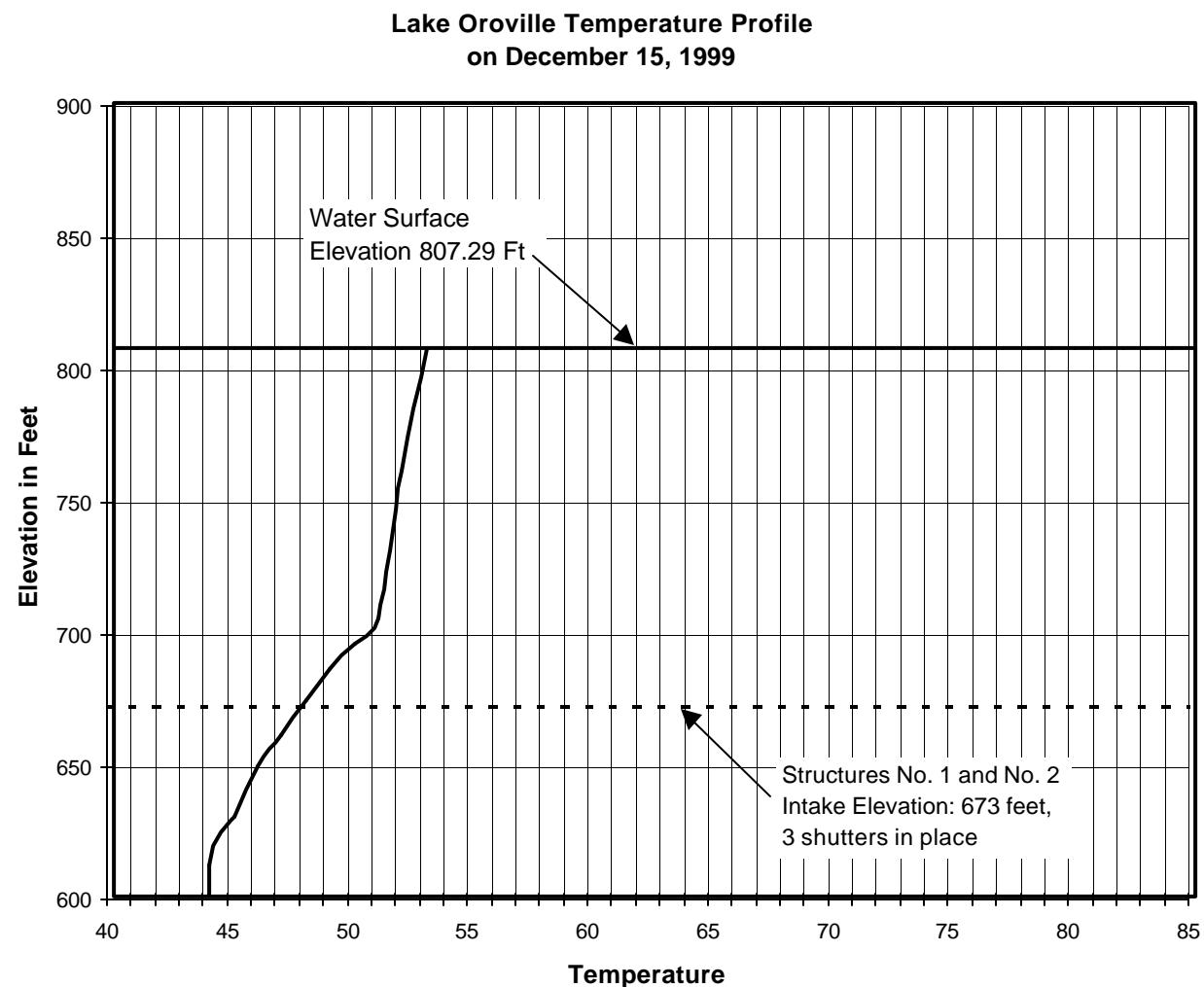
**Table 7. Oroville-Thermalito Complex**

Water Temperature Data

(in degrees Fahrenheit)

**December 1999**

Date	Mean Daily Temperature	
	Thermalito Afterbay Outlet	Fish Hatchery
1	49	51
2	49	51
3	48	51
4	48	51
5	48	51
6	47	51
7	48	51
8	47	51
9	47	51
10	46	51
11	46	51
12	47	51
13	46	51
14	46	50
15	46	50
16	46	50
17	46	50
18	46	50
19	46	50
20	47	50
21	48	50
22	48	51
23	48	51
24	48	51
25	48	51
26	48	50
27	48	50
28	48	50
29	48	50
30	48	50
31	48	50



Note: Water surface elevations on Table 4 are taken at Oroville Dam at midnight and may differ slightly from those shown on this table which are normally taken at mid-day and upstream from Oroville Dam.

## **Table 8. North Bay Aqueduct Delta Field Division, Monthly Deliveries**

(In acre-feet)

December 1999

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries				
	Beginning and Ending					Entitlement		Exchange		
	No.	Structure	Mile			M & I	Benicia			
1	1	Barker Slough Pumping Plant	0.17	(Into the North Bay Aqueduct)	4,238	178	579	1,372		
		Travis Surge Tank	8.78							
			8.80	Solano County Water Agency Travis Turnout	178					
			10.54	Solano County Water Agency Fairfield / Vacaville	579					
		Cordelia Forebay	21.23							
		Cordelia Pumping Plant & Cordelia Spillway	21.30		3,160					
3A	2		21.33	Solano County Water Agency Vallejo	1,372	929	743	116		
				Solano County Water Agency Benicia	929					
		Cordelia Surge Tank	23.33	Napa Pipeline						
		Creston Surge Tank Connection	25.65	Napa Pipeline						
			26.95	Napa County Flood Control & WCD American Canyon 2	0					
			27.27	Napa County Flood Control & WCD American Canyon 3	0					
3B		Napa Terminal Tank	27.58	City of Napa	743					
			27.60	Napa County Flood Control & WCD American Canyon 1	116					

**Table 9. Delta Field Division Plant Data**

(in acre-feet)

**December 1999**

Date	North Bay Aqueduct		California Aqueduct		South Bay Aqueduct			
	Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant		Gravity Flow Through Plant Into Aqueduct
			Total	SWP		Into Lake	Into Aqueduct	
1	113	103	11,698	11,698	276	0	0	69
2	117	103	12,608	12,608	237	0	0	147
3	117	100	10,539	10,539	311	0	0	41
4	111	97	10,555	10,555	354	0	0	0
5	115	98	10,528	10,528	368	0	0	0
6	124	109	13,373	13,373	372	0	0	0
7	119	101	12,716	12,716	386	0	0	0
8	150	88	12,665	12,665	373	0	0	0
9	163	99	12,350	12,350	423	65	0	0
10	150	89	6,420	6,420	512	131	0	0
11	144	91	6,417	6,417	512	177	0	0
12	139	91	6,563	6,563	524	188	0	0
13	150	98	4,882	4,882	537	174	0	0
14	137	86	1,549	1,549	359	76	0	48
15	156	99	1,337	1,337	206	0	0	149
16	153	95	1,516	1,516	161	17	116	83
17	157	97	1,500	1,500	526	205	0	0
18	172	108	1,518	1,518	566	207	0	0
19	181	112	1,536	1,536	573	209	0	0
20	167	109	2,540	2,540	472	127	0	0
21	178	118	4,411	4,411	334	0	0	0
22	150	103	6,232	6,232	360	0	0	0
23	143	113	8,128	8,128	368	0	0	0
24	121	112	5,756	5,756	384	0	0	0
25	131	121	5,883	5,883	386	0	0	0
26	131	121	7,784	7,784	358	0	0	0
27	130	121	7,583	7,583	380	0	0	0
28	135	119	8,647	8,647	402	0	0	0
29	99	91	10,749	10,749	361	0	0	0
30	103	93	12,690	12,690	328	0	0	0
31	82	75	13,210	13,210	184	0	0	117
Total	4,238	3,160	233,883	233,883	11,893	1,576	116	654

**Table 10. Clifton Court Forebay**

## Daily Operation of Gates

December 1999

**Table 11. Governor Edmund G. Brown California Aqueduct**

Delta Field Division, Monthly Deliveries

(In acre-feet)

**December 1999**

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitle-ment	USBR	Misc.	Loan Water	Carryover Ent.	
	No.	Structure	Mile							
1	Banks Pumping Plant	3.32		233,883						
2A	1	South Bay Pumping Plant	4.49	Bethany Reservoir Inlet	11,893	27	10	27		
		Check No. 1	5.95							
	2	Check No. 2	12.01							
	3		12.47	Musco Olive	27					
		Check No. 3	18.29							
	4		22.16	Tracy Golf & Country Club	10					
		Check No. 4	23.99							
	5	Check No. 5	29.73							
	6	Check No. 6	34.24							
	7		35.22	Turlock Fruit Company Inflow	0					
		Check No. 7	39.91							
2B	8		42.46	Oak Flat Water District-A	23	23	5	0		
			43.81	Oak Flat Water District-B	5					
			44.64	Oak Flat Water District-C	0					
		Check No. 8	45.97							
	9		46.18	Oak Flat Water District-D	91	91	0	0	0	
				Oak Flat Totals:	119					
		Check No. 9	51.30							
	10	Check No. 10	56.86							
	11	Check No. 11	61.40							
	12		66.14	Veteran's Cemetery	3	3				
		Check No. 12	66.71		212,993					

**Table 12. South Bay Aqueduct**

Delta Field Division, Monthly Deliveries

(In acre-feet)

**December 1999**

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries				
	Beginning and Ending				Entitle-ment	General Wheeling	Local	Recre-ation	
	No.	Structure	Mile						
1	1	South Bay Pumping Plant	0.00	(into South Bay Aqueduct)	11,893	3	2	375	
			3.17	Granite - Vasco Rd. (Temp.)	0				
			3.18	Oakland Scavenger Zone 7	3				
	2	Check No. 1	3.91						
2	3	Check No. 2	5.21						
			7.21	Zone 7 Altamont	2				
		Check No. 3	9.49	Zone 7 Patterson Stored Exchange	0				
4	4	Check No. 4	10.68						
	5	Check No. 5	12.29						
	6		13.55	Zone 7 Wente #1	54	54	26	610	
			14.16	Zone 7 Wente #2	26				
		Check No. 6	14.65						
	7		14.78	Zone 7 Arroyo Mocho	610	5	6	1,065	
		Check No. 7	16.38						
	8		16.57	Zone 7 Wente #3	0	5	127	102	
			16.69	Zone 7 Norman Nursery	0				
			16.70	Zone 7 Concannon Project Water	5				
		Del Valle Branch Pipeline Junction	18.63	(Pumped into Lake Del Valle)	1,576				
				(Flow into South Bay Aqueduct)	770				
5	8	Deliveries through Del Valle Branch Pipeline		Arroyo Valle #1 & #2 Project Water	0	6	1	1,464	
				Arroyo Valle #1 & #2 Stored Exchange	0				
				Lake Del Valle Recreation	5				
				Zone 7 Wente #5	6				
6	8		19.20	So. Livermore Project	1,065	7,224		7,224	
				So. Livermore Inflow Released	127				
				So. Livermore Stored Release	102				
			19.21	Zone 7 - Kalthrof Detjens	1				
7	8	La Costa Tunnel	22.50	ACWD Vallecitos Project Water	0				
			25.97	City of San Francisco San Antonio	0				
				ACWD - Bayside 1 & 2 Project Water:	1,464				
8	8	Mission Tunnel	28.97	Inflow Released	0				
				Stored Exchange:	0				
9		Santa Clara Pipeline	35.86	S.C.V.W.D. Meter	7,224				

**Table 13. Lake Del Valle**

Daily Operation

(in acre-feet except as noted)

**December 1999**

Capacity: 77,106 ac-ft

Date	Water Surface Elevation (feet)	Storage	Storage Change	Inflow		Outflow					Precipitation (inches)	
				Natural 1/	From South Bay Aqueduct 3/	Arroyo Valle	South Bay Aqueduct	Recreation Deliveries 2/	Evaporation	Total Outflow 3/		
Nov 30	682.94	27,334										
1	682.81	27,263	-71		0	0	69	0	2	71	0.20	
2	682.56	27,129	-134		0	0	147	0	3	150	0.00	
3	682.48	27,086	-43		0	0	41	0	3	44	0.00	
4	682.47	27,080	-6		0	0	0	0	3	3	0.00	
5	682.45	27,070	-10		0	0	0	0	3	3	0.00	
6	682.42	27,054	-16		0	0	0	0	0	0	0.00	
7	682.42	27,054	0		0	0	0	0	7	7	0.12	
8	682.40	27,043	-11		0	0	0	0	2	2	0.00	
9	682.52	27,102	59		65	0	0	0	2	2	0.00	
10	682.78	27,247	145		131	0	0	0	0	0	0.00	
11	683.12	27,431	184		177	0	0	0	6	6	0.00	
12	683.47	27,622	191		188	0	0	0	2	2	0.00	
13	683.82	27,814	192		174	0	0	0	2	2	0.00	
14	683.88	27,847	33		76	0	48	0	2	50	0.00	
15	683.63	27,710	-137		0	0	149	0	3	152	0.00	
16	683.32	27,540	-170		17	0	199	0	4	203	0.00	
17	683.69	27,742	202		205	0	0	0	4	4	0.00	
18	684.08	27,957	215		207	0	0	0	4	4	0.00	
19	684.43	28,151	194		209	0	0	0	3	3	0.00	
20	684.68	28,290	139		127	0	0	0	3	3	0.00	
21	684.65	28,273	-17		0	0	0	0	4	4	0.00	
22	684.67	28,284	11		0	0	0	0	5	5	0.00	
23	684.67	28,284	0		0	0	0	0	4	4	0.00	
24	684.67	28,284	0		0	0	0	0	4	4	0.00	
25	684.66	28,279	-5		0	0	0	0	5	5	0.00	
26	684.65	28,273	-6		0	0	0	0	2	2	0.00	
27	684.65	28,273	0		0	0	0	1	4	5	0.00	
28	684.64	28,268	-5		0	0	0	1	5	6	0.00	
29	684.65	28,273	5		0	0	0	1	2	3	0.00	
30	684.65	28,273	0		0	0	0	1	0	1	0.00	
31	684.46	28,167	-106		0	0	117	1	0	118	0.00	
Total				833	127	1,576	0	770	5	95	870	0.32

1/ Total inflow from stream gaging station above Lang Canyon and accretions/depletions.

2/ To East Bay Regional Park District.

3/ Not available on a daily basis.

NR=No Records

**Table 14. Consolidated State-Federal O'Neill Forebay**

Daily Operations

**December 1999**

United States  
Department of the Interior  
Bureau of Reclamation  
Central Valley Project

State of California  
The Resources Agency  
Department of Water Resources  
State Water Project

Capacity: 56,430 Acre-feet

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)				Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
				Pump In 1/	O'Neill Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	California Aqueduct	O'Neill Pumping Generating Plant (Generation)	Gianelli Pumping Generating Plant (Pumped)	Dos Amigos Pumping Plant	Deliveries 2/	
Nov 30	220.49	44,427										
1	222.20	48,916	4,489	0	3,734	0	5,645	0	4,391	3,219	6	500
2	222.31	49,208	292	0	3,789	0	5,893	0	6,581	3,327	6	379
3	221.60	47,336	-1,872	0	3,800	0	4,855	0	6,556	3,434	6	397
4	223.04	51,153	3,817	0	3,715	0	4,896	0	4,203	2,861	6	383
5	219.40	41,605	-9,548	0	3,714	0	4,922	0	10,194	3,606	6	356
6	222.52	49,767	8,162	0	3,699	0	6,757	0	3,304	3,550	6	519
7	222.77	50,433	666	0	3,692	0	5,989	0	5,911	3,492	6	64
8	222.67	50,166	-267	0	3,682	0	5,675	0	6,001	3,732	6	247
9	222.58	49,926	-240	0	3,688	0	5,901	0	6,021	3,919	6	236
10	221.90	48,124	-1,802	0	1,944	0	2,990	0	1,894	4,269	7	328
11	221.60	47,336	-788	0	509	0	3,079	0	0	4,108	7	130
12	220.75	45,106	-2,230	0	485	0	2,730	0	0	4,384	7	52
13	219.46	41,759	-3,347	0	338	148	2,060	139	0	4,294	7	207
14	218.94	40,432	-1,327	0	488	2,670	535	241	0	4,117	7	3
15	220.33	44,009	3,577	0	514	5,266	660	236	0	4,441	7	47
16	220.32	43,983	-26	0	512	3,171	868	231	0	4,427	7	101
17	220.30	43,931	-52	0	458	2,729	510	232	0	3,568	7	84
18	220.70	44,975	1,044	0	422	3,088	470	231	0	3,327	7	111
19	219.33	41,426	-3,549	0	417	1,173	474	234	0	3,667	7	55
20	219.77	42,557	1,131	0	485	1,916	715	236	0	2,319	7	16
21	220.76	45,132	2,575	0	505	1,100	1,902	231	0	2,210	7	239
22	221.19	46,259	1,127	0	508	870	2,594	228	0	3,390	7	221
23	221.92	48,176	1,917	0	508	0	3,841	298	0	3,259	7	181
24	222.83	50,593	2,417	0	2,008	0	2,768	135	0	3,442	7	27
25	222.06	48,544	-2,049	0	3,334	0	2,751	0	4,560	2,436	7	-115
26	220.93	45,577	-2,967	0	3,369	0	3,457	0	5,438	2,875	7	-2
27	221.92	48,176	2,599	0	3,330	0	3,285	0	2,134	3,562	7	398
28	222.78	50,459	2,283	0	3,356	0	4,119	0	3,116	3,362	7	161
29	222.27	49,102	-1,357	0	2,884	2,958	5,082	0	8,756	3,054	7	209
30	222.08	48,597	-505	0	3,163	2,198	5,622	0	8,087	3,538	7	394
31	222.88	50,726	2,129	0	3,523	2,008	6,335	0	8,044	3,231	7	489
Total			6,299	0	66,573	29,295	107,380	2,672	95,191	108,420	208	6,419
Mean cfs			---	0	2,148	945	3,464	86	3,071	3,497	7	207
Acre-feet			6,299	0	132,049	58,108	212,993	5,306	188,810	215,050	413	12,728

1/ Pump-in located at Mile 79.67R.

2/ Includes 119 AF delivered to DFG at O'Neill Forebay.

**Table 15. Consolidated State-Federal San Luis Reservoir**

Daily Operations

**December 1999**

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

Capacity: 2,027,835 ac-ft

State of California

The Resources Agency

Department of Water Resources

State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)	Outflow (cfs)			Computed Losses (-) Gains (+) (cfs)
				Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Parks and Rec. Del. 2/	
Nov 30	460.08	1,073,901						
1	460.86	1,081,904	8,003	4,391	0	38	1	-317
2	462.04	1,094,047	12,143	6,581	0	35	0	-424
3	463.22	1,106,234	12,187	6,556	0	32	0	-380
4	463.96	1,113,899	7,665	4,203	0	31	0	-308
5	465.80	1,133,032	19,133	10,194	0	31	0	-517
6	466.37	1,138,981	5,949	3,304	0	43	1	-261
7	467.43	1,150,070	11,089	5,911	0	56	0	-264
8	468.57	1,162,035	11,965	6,001	0	61	0	92
9	469.60	1,172,879	10,844	6,021	0	73	0	-481
10	469.95	1,176,572	3,693	1,894	0	90	0	58
11	469.93	1,176,361	-211	0	0	96	0	-10
12	469.88	1,175,833	-528	0	0	108	1	-157
13	469.83	1,175,305	-528	0	148	106	0	-12
14	469.31	1,169,823	-5,482	0	2,670	109	0	15
15	468.31	1,159,303	-10,520	0	5,266	109	0	71
16	467.68	1,152,691	-6,612	0	3,171	129	0	-34
17	467.12	1,146,824	-5,867	0	2,729	138	0	-91
18	466.53	1,140,653	-6,171	0	3,088	128	1	106
19	466.28	1,138,041	-2,612	0	1,173	122	0	-22
20	465.89	1,133,971	-4,070	0	1,916	133	0	-3
21	465.62	1,131,156	-2,815	0	1,100	139	0	-180
22	465.45	1,129,385	-1,771	0	870	141	0	118
23	465.40	1,128,864	-521	0	0	158	0	-105
24	465.37	1,128,552	-312	0	0	157	1	1
25	466.12	1,136,371	7,819	4,560	0	160	0	-458
26	467.07	1,146,300	9,929	5,438	0	156	0	-276
27	467.42	1,149,965	3,665	2,134	0	155	0	-131
28	467.96	1,155,628	5,663	3,116	0	157	0	-104
29	468.92	1,165,716	10,088	8,756	2,958	156	1	-555
30	469.91	1,176,150	10,434	8,087	2,198	158	0	-471
31	470.95	1,187,142	10,992	8,044	2,008	46	0	-448
Total			113,241	95,191	29,295	3,251	6	-5,548
Mean cfs			---	3,071	945	105	0	-179
Acre-feet			113,241	188,810	58,108	6,452	12	-10,997

1/ Pacheco Tunnel, San Felipe Split; Santa Clara: 6,431 AF, San Benito: 21 AF.

2/ The year end total for P&R = 12 AF; It has been included in this month for clarity.

**Table 16. San Luis Field Division Plant Data**

(in acre-feet)

**December 1999**

Date	Dos Amigos Pumping Plant		Gianelli Pumping - Generating Plant				San Felipe Project
	Total Pumping	SWP Pumping 1/, 2/	Total Generation	SWP Generation 1/, 2/	Total Pumping	SWP Pumping 1/, 2/	Federal
1	6,384	5,846	0	0	8,710	4,353	75
2	6,599	5,794	0	0	13,054	5,565	69
3	6,812	6,016	0	0	13,003	5,831	63
4	5,675	4,846	0	0	8,337	3,556	62
5	7,152	6,263	0	0	20,220	4,536	62
6	7,041	6,191	0	0	6,553	2,172	86
7	6,927	6,112	0	0	11,724	6,473	111
8	7,402	6,611	0	0	11,903	4,693	121
9	7,773	6,156	0	0	11,943	7,570	144
10	8,468	6,796	0	0	3,756	40	178
11	8,148	6,476	0	0	0	0	191
12	8,696	6,017	0	0	0	0	215
13	8,517	6,847	294	294	0	0	211
14	8,166	6,499	5,296	5,296	0	0	216
15	8,809	7,130	10,445	8,239	0	0	217
16	8,780	7,127	6,290	4,134	0	0	255
17	7,077	5,410	5,412	5,412	0	0	274
18	6,600	4,933	6,126	3,936	0	0	254
19	7,274	4,603	2,327	2,327	0	0	241
20	4,599	2,975	3,800	1,627	0	0	264
21	4,384	2,673	2,182	-35	0	0	276
22	6,724	5,019	1,726	-63	0	0	280
23	6,464	4,823	0	0	0	0	314
24	6,828	5,287	0	0	0	0	312
25	4,831	3,391	0	0	9,045	1,174	318
26	5,703	4,214	0	0	10,786	2,977	309
27	7,065	5,321	0	0	4,233	967	307
28	6,668	4,976	0	0	6,180	1,804	312
29	6,058	6,058	5,868	5,868	17,367	11,499	310
30	7,017	7,017	4,359	4,359	16,040	11,342	313
31	6,409	6,409	3,983	3,983	15,956	10,787	92
Total	215,050	173,836	58,108	45,377	188,810	85,339	6,452

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping;

adjustments to SWP water shares are made to balance the mismatch.

2/ Provisional, subject to change.

**Table 17. Consolidated State-Federal Los Banos Reservoir**

Daily Operations  
December 1999

United States  
Department of the Interior  
Bureau of Reclamation  
Central Valley Project

State of California  
The Resources Agency  
Department of Water Resources  
State Water Project

Capacity: 34,560 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Estimated Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet	
Nov 30	326.08	19,777					
1	326.08	19,777	0	0	0	0	0
2	326.08	19,777	0	0	0	0	0
3	326.06	19,767	-10	0	0	0	-10
4	326.06	19,767	0	0	0	0	0
5	326.06	19,767	0	0	0	0	0
6	326.07	19,772	5	3	0	0	-1
7	326.06	19,767	-5	0	0	0	-5
8	326.05	19,763	-4	0	0	0	-4
9	326.06	19,767	4	2	0	0	0
10	326.05	19,763	-4	0	0	0	-4
11	326.05	19,763	0	0	0	0	0
12	326.07	19,772	9	5	0	0	-1
13	326.05	19,763	-9	0	0	0	-9
14	326.04	19,758	-5	0	0	0	-5
15	326.04	19,758	0	0	0	0	0
16	326.04	19,758	0	0	0	0	0
17	326.05	19,763	5	3	0	0	-1
18	326.06	19,767	4	2	0	0	0
19	326.05	19,763	-4	0	0	0	-4
20	326.05	19,763	0	0	0	0	0
21	326.05	19,763	0	0	0	0	0
22	326.05	19,763	0	0	0	0	0
23	326.05	19,763	0	0	0	0	0
24	326.05	19,763	0	0	0	0	0
25	326.05	19,763	0	0	0	0	0
26	326.05	19,763	0	0	0	0	0
27	326.04	19,758	-5	0	0	0	-5
28	326.05	19,763	5	3	0	0	-1
29	326.06	19,767	4	2	0	0	0
30	326.06	19,767	0	0	0	0	0
31	326.06	19,767	0	0	0	0	0
Total			-10	20	0	0	-50
Mean cfs			---	1	0	0	---
Acre-feet			-10	40	0	0	-50

**Table 18. Consolidated State-Federal Little Panoche Reservoir**

Daily Operations

**December 1999**

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

State of California

The Resources Agency

Department of Water Resources

State Water Project

Capacity: 5,580 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft) 1/	Storage Change (ac-ft) 1/	Computed Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft) 1/
					Spill	Outlet	
Nov 30	602.60	826			2	0	2
1	Not Observed				2	0	0
2	Not Observed				2	0	0
3	602.60	826	0		2	0	0
4	Not Observed				2	0	0
5	Not Observed				2	0	0
6	Not Observed				2	0	0
7	602.60	826	0		2	0	0
8	Not Observed				2	0	0
9	602.60	826	0		2	0	0
10	602.60	826	0		2	0	0
11	Not Observed				2	0	0
12	Not Observed				2	0	0
13	602.60	826	0		2	0	0
14	602.60	826	0		2	0	0
15	Not Observed				2	0	0
16	Not Observed				2	0	0
17	602.60	826	0		2	0	0
18	Not Observed				2	0	0
19	Not Observed				2	0	0
20	602.60	826	0		2	0	0
21	602.60	826	0		2	0	0
22	Not Observed				2	0	0
23	602.60	826	0		2	0	0
24	602.60	826	0		2	0	0
25	Not Observed				2	0	0
26	Not Observed				2	0	0
27	602.60	826	0		2	0	0
28	602.60	826	0		2	0	0
29	Not Observed				2	0	0
30	602.60	826	0		2	0	0
31	602.60				2	0	0
<b>Total</b>			0	62	0	62	---
<b>Mean cfs</b>			---	2	0	2	---
<b>Acre-feet</b>			0	123	0	123	0

1/ Not available on a daily basis

**Table 19a. Governor Edmund G. Brown California Aqueduct**

San Luis Field Division, Monthly Deliveries

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending					USBR	Transfer	DWR	USBR		
	No.	Structure	Mile					Recreation	Recreation		
2B	12	Check No. 12	66.71		212,993						
3	13	O'Neill Forebay		Department of Parks and Recreation	157	137	137	86	71		
		Outlet Check No. 13	70.85	Department of Fish & Game	119			65	54		
		70.91 Thru 85.08	San Luis Water District (Floodwater Inflow)	137 0							
								152	124		
		Dos Amigos Pumping Plant	86.73		215,050						
4	14	89.03 Thru 94.06 89.66 Thru 89.67 89.68 89.70	San Luis Water District	39	39 63 4 161	39 63 4 161	416 1,041	1/ 1,300			
			Pacheco Water District	63							
			Panoche Water District	4							
			City of Dos Palos	161							
		Check No. 14	95.06								
	15	98.15 Thru 104.20 96.15 Thru 102.64 102.64 105.22 Thru 108.64	San Luis Water District	416	416 1,041 1 587	416 1,041 1 587	1/ 1,300	1/ 1,300			
			Panoche Water District	1,041							
			(Floodwater Inflow)	0							
			Broadview Water District	1							
			Westlands Water District	1,887							
	Check No.15	108.50									
			Pacheco Water District Total:	63	63	63	0	0	0		
			Broadview Water District Total:	1	1	1	0	0	0		
			City of Dos Palos Total:	161	161	161	0	0	0		
			SLWD Reach 4 Subtotal:	455	455	455	0	0	0		
			Panoche Water District Total:	1,045	1,045	1,045	0	0	0		
			SLWD Total:	592	592	592	0	0	0		
			Westlands WD Reach 4 Subtotal:	1,887	587	587	1,300	0	0		

1/ Tulare Lake Basin WSD entitlement water transferred to Westlands WD as per agreement dated January 13, 2000.

**Table 19b. Governor Edmund G. Brown California Aqueduct**

San Luis Field Division, Monthly Deliveries (Continued)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries									
	Beginning and Ending					USBR	Transfer	Exchange	DWR	USBR					
	No.	Structure	Mile						Recreation	Recreation					
5	16		110.52	(Reverse flow, Kings River)	0	1,108	1/ 4,000		1	0					
			Thru	Westlands Water District	5,108										
			122.05	Department of Fish and Game	1										
		Check No. 16	122.07												
	17		124.18	Westlands Water District	2,539	2,539									
			Thru												
		Check No. 17	132.95												
	18		133.81	Westlands Water District	3,563	3,563									
			Thru												
			142.61												
		Pleasant Valley Pumping Plant	143.16	Westlands Water District	3,944										
			143.16	City of Coalinga	258										
		Check No. 18	143.23												
				Westlands WD Reach 5 Subtotal:	15,154	11,154	4,000		0	0					
6	19		145.26	Westlands Water District	8,154	4,154	1/ 4,000								
			Thru												
			151.19												
		Check No. 19	155.64												
				Westlands WD Reach 6 Subtotal:	8,154	4,154	4,000		0	0					
7	20		156.34	City of Huron	59	59	1/ 4,470								
			156.40	Westlands Water District	4,587										
			Thru												
			163.69												
		Check No. 20	164.69												
	21		164.79	City of Avenal	177	177	2/ 837								
			167.04	Westlands Water District	1,367										
			Thru												
			171.67												
		Check No. 21	172.40		179,814										
				Reach 7 Total:	6,190	883	5,307		0	0					
				Westlands WD Total:	31,149	16,542	13,770	837	0	0					
				City of Coalinga Total:	258	258	0		0	0					
				City of Huron Total:	59	59	0		0	0					
				City of Avenal Total:	177	177	0		0	0					
				Phase I Water Total:	0	0	0		0	0					
Total San Luis Field Division Deliveries:					33,782	18,898	13,770	837	152	125					

1/ Tulare Lake Basin WSD entitlement water transferred to Westlands WD as per agreement dated January 13, 2000.

2/ Kern County Water Agency exchange of 420 AF of Ag Ent. and 417 AF of Munic. Ent.

**Table 20. Consolidated State-Federal San Luis Canal 1/**

Daily Operations  
December 1999

United States  
Department of the Interior  
Bureau of Reclamation  
Central Valley Project

State of California  
The Resources Agency  
Department of Water Resources  
State Water Project

Date	Storage In Canal (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
			Non- Project 2/	Dos Amigos Pumping Plant	Pools 14 & 15 3/	Pool 15	Pools 15 thru 21 4/	Flow Past Check 21	
Nov 30	28,404								
1	28,072	-332	0	3,219	4	4	388	2,840	-150
2	28,707	635	0	3,327	6	4	487	2,356	-154
3	28,717	10	0	3,434	7	4	488	2,932	2
4	27,358	-1,359	0	2,861	5	4	523	2,857	-157
5	28,054	696	0	3,606	5	4	517	2,646	-83
6	28,212	158	0	3,550	6	4	622	2,692	-146
7	28,430	218	0	3,492	12	6	605	2,748	-11
8	28,019	-411	0	3,732	12	8	571	3,314	-34
9	27,882	-137	0	3,919	12	21	566	3,446	57
10	28,102	220	0	4,269	10	22	594	3,505	-27
11	27,436	-666	0	4,108	10	13	624	3,730	-66
12	28,284	848	0	4,384	10	20	647	3,265	-14
13	27,820	-464	0	4,294	13	27	572	3,864	-52
14	26,901	-919	0	4,117	19	28	596	3,917	-20
15	27,428	527	0	4,441	17	26	593	3,282	-258
16	27,739	311	0	4,427	17	34	675	3,541	-3
17	28,370	631	0	3,568	25	34	611	2,463	-117
18	28,508	138	0	3,327	17	18	603	2,504	-116
19	28,875	367	0	3,667	15	18	586	2,769	-94
20	28,668	-207	0	2,319	12	28	461	1,881	-41
21	28,574	-94	0	2,210	13	20	471	1,579	-175
22	28,788	214	0	3,390	12	21	478	2,575	-196
23	28,636	-152	0	3,259	9	12	491	2,781	-42
24	28,957	321	0	3,442	8	12	494	3,062	297
25	28,764	-193	0	2,436	8	12	329	2,673	488
26	28,550	-214	0	2,875	8	12	387	2,950	374
27	29,108	558	0	3,562	9	19	327	2,692	-233
28	28,705	-403	0	3,362	11	19	378	3,082	-75
29	28,589	-116	0	3,054	10	19	388	2,750	55
30	28,580	-9	0	3,538	10	27	440	3,195	130
31	28,991	411	0	3,231	10	27	442	2,763	218
Total		587	0	108,420	342	527	15,954	90,655	-646
Mean cfs		---	0	3,521	11	16	524	2,927	-21
Acre-feet		587	0	215,050	679	1,045	31,645	179,814	-1,280

1/ San Luis Canal includes Pools 14 through 21 of the California Aqueduct.

2/ Pump In of Non-Project Water (0 AF @ Lat.7L) and Flood Water (0 AF) is included in the gain or loss.

3/ Includes 455 AF to SLWD, 62 AF AG & 1 AF M&I to Pacheco W.D. and 161 AF to the City of Dos Palos.

4/ Includes 59 AF to the City of Huron, 177 AF to the City of Avenal, 258 AF to the City of Coalinga, 0 AF Phase I Water @ Lat. 13R, 1 AF to Broadview W.D., 1 AF Fish & Game @ Lat. 4L, and 31,149 AF to WWD.

**Table 21. San Joaquin Field Division Plant Data**

(in acre-feet)

**December 1999**

Date	Coastal Aqueduct					California Aqueduct			
	Las Perillas Pumping Plant	Badger Hill Pumping Plant	Devil's Den Pumping Plant	Bluestone Pumping Plant	Polonio Pass Pumping Plant	Buena Vista Pumping Plant	Teerink Pumping Plant	Chrisman Pumping Plant	Edmonston Pumping Plant
1	77	77	46	40	46	3,364	3,460	3,314	3,330
2	64	64	46	44	48	2,918	2,965	2,886	2,895
3	123	123	53	50	55	3,490	3,528	3,389	3,341
4	163	163	53	47	54	3,911	3,746	3,634	3,680
5	137	137	46	42	48	3,779	3,899	3,729	3,733
6	110	110	46	42	48	3,528	3,602	3,537	3,540
7	104	104	46	41	48	3,196	3,120	3,040	3,062
8	46	46	36	35	40	5,043	5,163	4,979	5,154
9	91	91	53	48	55	5,038	5,051	4,879	4,835
10	69	69	50	47	53	5,038	4,972	4,879	4,915
11	82	82	42	38	44	5,223	5,127	4,979	5,049
12	37	37	33	33	32	5,038	5,149	4,979	5,022
13	54	54	46	41	48	5,038	5,143	4,979	5,076
14	73	73	46	42	48	5,197	4,979	4,979	5,022
15	61	61	40	35	41	4,671	4,467	4,305	4,273
16	130	130	55	51	57	3,833	3,676	3,471	3,513
17	200	200	46	41	48	2,400	2,322	2,282	2,370
18	196	196	49	46	51	2,861	2,690	2,611	2,588
19	119	119	57	51	58	3,044	3,015	2,942	3,010
20	163	163	47	43	49	1,956	2,024	1,961	1,990
21	146	146	49	44	51	2,022	1,979	1,911	1,990
22	193	193	62	60	67	3,939	3,740	3,633	3,674
23	189	189	73	65	74	3,776	3,603	3,487	3,441
24	55	55	48	42	48	5,038	4,906	4,748	4,808
25	52	52	48	43	50	4,828	5,040	4,902	4,942
26	108	108	55	49	55	5,038	5,064	4,979	4,969
27	138	138	39	38	42	4,566	4,479	4,294	4,322
28	189	189	64	54	65	4,461	4,448	4,359	4,351
29	161	161	66	62	69	4,675	4,838	4,636	4,671
30	203	203	68	61	68	5,256	5,065	4,902	4,915
31	246	246	70	66	73	4,479	4,295	4,036	3,991
Total	3,779	3,779	1,578	1,441	1,633	126,644	125,555	121,641	122,472

**Table 22a. Governor Edmund G. Brown California Aqueduct**

San Joaquin Field Division, Monthly Deliveries

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries						
	Beginning and Ending		Structure			Entitlement	USBR	Purchase Pool A	Purchase Pool B	MWD Ent. 1/		
	No.	Mile										
7	21	Check No. 21	172.40		179,814							
8C	22		172.66	Empire West Side Irrig. Dist.		3	500	7,228	1			
				TL - A	3							
				County of Kings								
				TL - A	500							
				TLBWS D TL-A	7,228							
				175.18	DRWD - 1							
				177.54	DRWD - 1B							
				180.64	TLBWS D - C							
				180.65	DRWD - 1A							
				182.99	DRWD - 2							
8D				183.00	Tulare Lake Basin WSD	7,148	3,779	0	0	0		
				TL - B								
31A				184.63	Coastal Branch							
8D				184.78	Dudley Ridge Water Dist.	109	0	0	301	0		
					DRWD - 3							
9	23			Dudley Ridge Reach 8D Total:	301	14,376	0	0	14,376	0		
				184.78	Tulare Lake Basin WSD Total:							
				Check No. 22	184.82							
					Kern County Water Agency	239	919	515	0	1,987		
				189.69	Lost Hills Water Dist. - 1							
				191.18	Lost Hills Water Dist. - 2							
				194.22	Lost Hills Water Dist. - 3							
				196.40	Berrenda Mesa - 2							
				196.75	Lost Hills Water Dist. - 4							
10A					K.C.W.A. Reach 9 Subtotal:							
				Check No. 23	197.05							
10A	24				Kern County Water Agency	39	1,224	109	10	3,146		
				201.24	Lost Hills Water Dist. - 7							
				202.05	Lost Hills Water Dist. - 5							
				204.69	Lost Hills Water Dist. - 6							
				205.26	Lost Hills Water Dist. - 8							
				Check No. 24	207.94							
					Kern County Water Agency							
				209.71	Belridge Water Storage Dist. - 1A							
				209.78	USBR BV-1B							
					Kern County Water Agency							
					Buena Vista WSD 1B							
				209.80	KCWA Semitropic WSD							
					0							
					KCWA Semitropic WSD Penstocks							
					USBR Total:							
					0							
					K.C.W.A. Reach 10A Subtotal:							
					4,528							

1/ Semitropic WSD is storing this water for MWD.

**Table 22b. Governor Edmund G. Brown California Aqueduct**

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries						
	Beginning and Ending					Entitle-ment	Federal Wheeling	Purchase Pool A	Purchase Pool B	MWD Ent. 2/		
	No.	Structure	Mile									
11B	25		210.75	Kern County Water Agency Belridge - 2	0	1,685	223	0	0	0		
			214.11	Kern County Water Agency Belridge - 3	0							
			216.62	Kern County Water Agency Belridge - 4	0							
			217.13	Kern County Water Agency Belridge - 5	1,685							
				Kern County Water Agency Belridge - 5D	223							
			Check No. 25	217.79								
				K.C.W.A. Reach 11B Subtotal:	1,908							
12D	26		219.58	Kern County Water Agency Belridge - 6	0	4,794	985	546	4,369			
			Check No. 26	224.92								
12E	27		230.37	Kern County Water Agency Buena Vista - 6	0							
			Check No. 27	231.73								
	28		235.75	Kern County Water Agency Buena Vista - 2	0							
			238.04	Kern County WA CVC	10,694							
				DRWD CVC	0							
				Tulare Co.	0							
				Lower Tule River	0							
				Fresno Co.	0							
				Pixley ID	0							
				Hacienda DWR Wells	0							
			Check No. 28	238.11								
				1/ Arvin Edison Total:	0	4,794	0	985	546	4,369		
				Reach 12E Subtotal:	10,694							
13B	29		241.02	Kern River Intertie (inflow)	0	1,705	2,665	5,566	55			
			242.85	KCWA Buena Vista WSD - 7	0							
				KCWA Buena Vista WSD - 5	2,665							
				Kern County Water Agency Buena Vista - 3	5,566							
				Check No. 29	244.54							
	30		243.09	Buena Vista WSD	0							
			249.85	Kern County Water Agency Buena Vista - 4	1,760							
				Buena Vista Pumping Plant	126,644							
				K.C.W.A. Reach 13B Subtotal:	9,991							
14A	31		254.47	Kern County Water Agency West Kern - 2	0	26	8,286	0	0			
			256.11	Kern County Water Agency Wheeler Ridge-Maricopa - 2	26							

1/ Arvin Edison Contractors include Rag Gulch WD, Kern-Tulare WD, Fresno County, Hills Valley ID, Tri Valley WD, Tulare County, Lower Tule River ID, and Pixley ID.

2/ Arvin-Edison WSD is storing this water for MWD per agreement dated 12/29/97; amended and extended by DWR letter dated 4/13/99.

**Table 22c. Governor Edmund G. Brown California Aqueduct**

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries						
	Beginning and Ending		Mile			Entitlement	Inter-ruptible Ent.	Purchase Pool A	Purchase Pool B	MWD Ent. 1/		
	No.	Structure										
14A	31	Check No. 31	256.14	Kern County Water Agency Wheeler Ridge-Maricopa - 3 Wheeler Ridge-Maricopa - 4	91 225	91 225				0 0 0 0 0		
	32		258.61									
			260.44									
			Check No. 32	261.72								
				KCWA Reach 14A Subtotal:	342							
14B	33		264.42	Kern County Water Agency Wheeler Ridge-Maricopa - 5	1,065	1,065 75 549				0 0 0 0 0		
			266.91	Kern County Water Agency Wheeler Ridge-Maricopa - 6	75							
			Check No. 33	267.36								
	34		270.24	Kern County Water Agency Wheeler Ridge-Maricopa - 7	549							
			Check No. 34	271.27								
				Reach 14B Total:	1,689							
14C	35		272.39	Kern County Water Agency Wheeler Ridge-Maricopa - 8	614	614 1,017				0 0 0 0 0		
			276.09	Kern County Water Agency Wheeler Ridge-Maricopa - 9	1,017							
				Reach 14C Total:	1,631							
15A	36	Teerink Pumping Plant	278.13		125,555	11 434				0 0 0 0 0		
				Kern County Water Agency Wheeler Ridge-Maricopa - 9A	11							
				Kern County Water Agency Wheeler Ridge-Maricopa - 10	434							
				Reach 15-A Total:	445							
16A	37	Chrisman Pumping Plant	280.36		121,641	0 96				0 0 0 0 0		
				Kern County Water Agency Wheeler Ridge-Maricopa - 11	0							
			Check No. 37	283.95								
				Kern County Water Agency Wheeler Ridge-Maricopa - 12	0							
	38		285.01	Kern County Water Agency Wheeler Ridge-Maricopa - 13A	96	96				0 0 0 0 0		
			286.39	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0							
			287.06	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0							
	39		Check No. 38	287.09								
	40	Edmonston Pumping Plant	287.62	Kern County Water Agency Wheeler Ridge-Maricopa - 13B	74	74 150 12				0 0 0 0 0		
			Check No. 39	290.21								
				Kern County Water Agency Wheeler Ridge-Maricopa - 14	150							
				Kern County Water Agency Wheeler Ridge-Maricopa - 15	12							
				Kern County Water Agency Tehachapi Cummings CWD	0							
17E				K.C.W.A. Reach 16A Subtotal:	332					0 0 0 0 0		
					122,472							

1/ Semitropic WSD is storing this water for MWD.

**Table 23. Governor Edmund G. Brown California Aqueduct**

San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries					
	Beginning and Ending		Structure			Entitlement	Inter-ruptible Ent.	MWD Ent. 1/	Purchase Pool A	Purchase Pool B	
	No.	Structure	Mile								
31A	C-1	Coastal Branch Control	0.02		3,779	200	59	1,841	0	0	
		Las Perillas Pumping Plant	1.16		3,779						
	C-2		3.79	Green Valley Water District	0						
		Badger Hill Pumping Plant	4.27		3,779						
	C-3	Coastal Check No. 3	7.21								
	C-4		9.34	Castaic Lake WA (Devil's Den WD #1)	200						
		Coastal Check No. 4	9.34								
	C-5	Coastal Check No. 5	12.20								
	C-6		13.30	Kern County Water Agency Berrenda Mesa - 3	59						
			14.83	Kern County Water Agency Berrenda Mesa - DD	0						
				Kern County Water Agency Berrenda Mesa - PO	1,841						
		Devil's Den Pumping Plant	14.86		1,578						
				K.C.W.A. Reach 31A Subtotal:	1,900	1,900	0	0	0	0	
				K.C.W.A. Total:	37,120	22,934	0	4,369	9,271	546	
33A	C-7	Bluestone Pumping Plant	19.05		1,441	1,331	315	1,646	0	0	
	C-8	Polonio Pass Pumping Plant	26.54		1,633						
	C-9	Tank Site 1	27.81	(CCWA) Polonio Pass Treatment Plant							
	C-10	Shandon T.O.	38.23	Santa Barbara County (CCWA)	1,331						
		Tank Site 2	58.63	Central Coast:	0						
34	C-11	Chorro Valley T.O.	69.31	San Luis Obispo County (CCWA)	315	1,646	0	0	0	0	
		Energy Dissipater	78.12								
	C-12	Lopez T.O.	85.86	SLOCFC & WCD	0						
				CCWA Total:	1,646						
35	Guadalupe T.O.	102.70		SBCFC & WCD	0	0	0	0	0	0	
	Santa Maria T.O.	107.43		SBCFC & WCD	0						
	So. Cal. Water T.O.	109.20		SBCFC & WCD	0						
38				SBCFC & WCD Total:	0	0	0	0	0	0	
	Tank Site 5	115.42									

1/ Semitropic WSD is storing this water for MWD.

**Table 24. Southern Field Division Plant Data**

(in acre-feet)

December 1999

Date	West Branch					East Branch								Devil Canyon Powerplant Generation	
	Oso Pumping Plant	Warne Powerplant		Castaic Powerplant		Alamo Powerplant			Pearblossom Pumping Plant	Mojave Siphon Powerplant					
		Generation	Leakage	Generation	Pumpback	Through Plant	Cottonwood Chute	Generation		Generation	Leakage	Bypass Flume			
1	1,497	1,489	0	3,167	1,844	1,826	0	0	1,703	1,793	0	0	1,547		
2	1,393	1,491	0	6,223	1,424	1,605	0	0	1,605	1,604	0	0	1,390		
3	1,165	1,419	0	1,708	823	2,094	0	0	2,104	2,010	0	0	1,833		
4	1,588	1,525	0	86	175	2,058	0	0	2,040	1,845	0	0	1,993		
5	1,279	416	0	186	1,102	2,437	0	0	1,604	1,663	0	0	1,617		
6	1,597	1,502	0	3,541	2,544	1,928	0	0	1,444	1,628	0	0	1,643		
7	1,177	1,376	0	4,429	2,254	1,895	0	0	1,785	1,448	0	0	2,035		
8	953	927	0	4,416	2,155	3,683	0	417	3,987	3,940	0	29	1,723		
9	708	886	0	3,288	1,002	3,707	0	432	3,987	4,018	0	0	2,090		
10	685	920	0	611	2,243	3,707	0	432	3,987	3,996	0	0	1,709		
11	876	985	0	231	790	3,709	0	432	3,987	3,992	0	0	1,309		
12	839	451	0	438	4,174	3,709	0	432	3,987	3,988	0	0	1,423		
13	891	942	0	3,608	3,901	3,713	0	432	3,987	3,972	0	0	1,707		
14	813	858	0	4,615	2,583	3,706	0	432	4,086	4,008	0	0	1,720		
15	601	764	0	2,402	1,786	3,441	0	271	3,714	3,712	0	0	1,464		
16	782	978	0	1,821	1,648	2,663	0	35	2,805	2,865	0	0	1,562		
17	734	974	0	3,362	1,427	1,539	0	105	1,532	1,447	0	0	1,456		
18	665	896	0	1,077	1,657	1,907	0	3	1,917	1,909	0	0	1,539		
19	883	0	0	178	1,991	214	0	1,932	1,436	1,366	0	0	1,424		
20	480	358	0	5,935	1,618	0	21	1,312	1,589	1,386	0	0	1,466		
21	331	500	0	6,992	1,421	0	22	1,643	1,495	1,421	0	0	1,551		
22	1,190	1,078	0	5,085	1,575	0	23	2,567	2,078	2,219	0	0	1,508		
23	1,407	1,452	0	4,302	1,889	0	21	2,154	2,026	2,049	0	0	1,976		
24	2,939	3,001	0	3,890	3,159	0	21	2,110	1,811	1,550	0	0	1,928		
25	2,635	2,921	0	3,020	4,420	0	22	2,433	1,924	1,836	0	0	2,013		
26	2,695	2,598	0	3,662	3,101	0	0	2,339	1,991	2,082	0	0	1,974		
27	2,235	2,274	0	3,781	914	0	22	2,131	1,947	1,979	0	0	1,925		
28	2,333	2,301	0	4,174	1,550	0	25	2,059	1,923	1,834	0	0	2,181		
29	2,368	2,751	0	6,621	997	113	0	1,590	2,362	1,996	0	0	2,114		
30	2,328	2,793	0	5,872	1,850	2,589	0	0	2,332	2,503	0	0	2,187		
31	2,022	1,769	0	2,325	2,206	1,969	0	0	1,916	2,017	0	0	2,171		
Total	42,089	42,595	0	101,046	60,223	54,212	177	25,693	75,091	74,076	0	29	54,178		

**Table 25. Pyramid Lake**  
Daily Operation

Capacity: 171,200 ac-ft

(in acre-feet except as noted)

December 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow			Computed Losses (-) Gains (+)	
				Project		Natural	Project		Natural		
				Castaic Powerplant Pumpback	Warne Powerplant	Stream Flow	Castaic Powerplant Generation	Recreation Deliveries	To Piru Creek		
Nov 30	2570.64	160,573									
1	2570.73	160,685	112	1,844	1,489	26	3,167	0	20	-60	
2	2567.82	157,089	-3,596	1,424	1,491	26	6,223	0	20	-294	
3	2568.07	157,396	307	823	1,419	26	1,708	0	20	-233	
4	2569.43	159,072	1,676	175	1,525	26	86	0	20	56	
5	2570.46	160,349	1,277	1,102	416	26	186	0	20	-61	
6	2570.80	160,772	423	2,544	1,502	27	3,541	0	20	-89	
7	2569.98	159,753	-1,019	2,254	1,376	26	4,429	0	20	-226	
8	2568.79	158,282	-1,471	2,155	927	26	4,416	0	20	-143	
9	2567.51	156,710	-1,572	1,002	886	27	3,288	0	20	-179	
10	2569.68	159,382	2,672	2,243	920	27	611	0	20	113	
11	2570.82	160,797	1,415	790	985	27	231	0	20	-136	
12	2574.28	165,143	4,346	4,174	451	27	438	0	20	152	
13	2575.00	166,057	914	3,901	942	28	3,608	0	20	-329	
14	2574.04	164,839	-1,218	2,583	858	27	4,615	0	20	-51	
15	2574.18	165,016	177	1,786	764	27	2,402	0	20	22	
16	2574.74	165,726	710	1,648	978	28	1,821	0	20	-103	
17	2573.87	164,624	-1,102	1,427	974	27	3,362	0	20	-148	
18	2575.01	166,070	1,446	1,657	896	27	1,077	0	20	-37	
19	2576.41	167,856	1,786	1,991	0	27	178	0	20	-34	
20	2573.29	163,892	-3,964	1,618	358	27	5,935	0	20	-12	
21	2569.32	158,936	-4,956	1,421	500	27	6,992	0	20	108	
22	2567.30	156,452	-2,484	1,575	1,078	27	5,085	0	20	-59	
23	2566.45	155,415	-1,037	1,889	1,452	27	4,302	0	20	-83	
24	2567.93	157,224	1,809	3,159	3,001	27	3,890	0	20	-468	
25	2571.34	161,445	4,221	4,420	2,921	27	3,020	0	20	-107	
26	2572.86	163,350	1,905	3,101	2,598	27	3,662	0	20	-139	
27	2572.44	162,822	-528	914	2,274	27	3,781	0	20	58	
28	2571.98	162,246	-576	1,550	2,301	27	4,174	0	20	-260	
29	2569.53	159,196	-3,050	997	2,751	27	6,621	0	20	-184	
30	2568.46	157,876	-1,320	1,850	2,793	27	5,872	0	20	-98	
31	2569.85	159,592	1,716	2,206	1,769	26	2,325	0	19	59	
Total				-981	60,223	42,595	831	101,046	0	619	-2,965

**Table 26. Elderberry Forebay**

Daily Operation  
(in acre-feet except as noted)

Capacity: 32,746 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow		Computed Losses (-) Gains (+)	
				Castaic Powerplant Generation	Natural	Castaic Powerplant Pumpback	To Castaic Lake		
							Natural	Project	
Nov 30	1522.55	24,339							
1	1521.95	24,078	-261	3,167	0	1,844	0	1,584	0
2	1527.04	26,328	2,250	6,223	0	1,424	0	2,548	-1
3	1521.15	23,733	-2,595	1,708	0	823	0	3,480	0
4	1520.95	23,647	-86	86	0	175	0	0	3
5	1518.76	22,715	-932	186	0	1,102	0	0	-16
6	1521.23	23,767	1,052	3,541	0	2,544	0	0	55
7	1526.34	26,013	2,246	4,429	0	2,254	0	0	71
8	1524.98	25,406	-607	4,416	0	2,155	0	2,867	-1
9	1529.99	27,677	2,271	3,288	0	1,002	0	0	-15
10	1523.64	24,815	-2,862	611	0	2,243	0	1,228	-2
11	1522.33	24,243	-572	231	0	790	0	0	-13
12	1513.31	20,480	-3,763	438	0	4,174	0	0	-27
13	1513.01	20,361	-119	3,608	0	3,901	0	0	174
14	1512.84	20,294	-67	4,615	0	2,583	0	2,100	1
15	1514.27	20,865	571	2,402	0	1,786	0	0	-45
16	1514.65	21,018	153	1,821	0	1,648	0	0	-20
17	1513.84	20,692	-326	3,362	0	1,427	0	2,263	2
18	1512.01	19,966	-726	1,077	0	1,657	0	0	-146
19	1507.67	18,299	-1,667	178	0	1,991	0	0	146
20	1512.16	20,025	1,726	5,935	0	1,618	0	2,591	0
21	1524.97	25,402	5,377	6,992	0	1,421	0	0	-194
22	1525.91	25,820	418	5,085	0	1,575	0	3,093	1
23	1526.23	25,967	147	4,302	0	1,889	0	2,269	3
24	1522.00	24,100	-1,867	3,890	0	3,159	0	2,596	-2
25	1515.48	21,356	-2,744	3,020	0	4,420	0	1,343	-1
26	1517.08	22,013	657	3,662	0	3,101	0	0	96
27	1517.60	22,229	216	3,781	0	914	0	2,652	1
28	1515.17	21,229	-1,000	4,174	0	1,550	0	3,522	-102
29	1522.80	24,448	3,219	6,621	0	997	0	2,405	0
30	1526.03	25,874	1,426	5,872	0	1,850	0	2,597	1
31	1520.88	23,617	-2,257	2,325	0	2,206	0	2,375	-1
Total				-722	101,046	0	60,223	0	41,513
									-32

**Table 27. Castaic Lake**

Daily Operation

(in acre-feet except as noted)

Capacity: 323,699 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow		Computed Losses (-) Gains (+)	
				From Elderberry Forebay		Natural	Deliveries	Released To Castaic Lagoon		
				Natural	Project					
Nov 30	1497.16	285,258								
1	1497.27	285,486	228	0	1,584	3	1,367	0	8	
2	1497.96	286,920	1,434	0	2,548	4	1,325	0	207	
3	1498.96	289,007	2,087	0	3,480	4	1,269	0	-128	
4	1498.37	287,775	-1,232	0	0	4	1,153	40	-43	
5	1497.77	286,525	-1,250	0	0	3	1,204	40	-9	
6	1497.17	285,278	-1,247	0	0	3	1,244	40	34	
7	1496.40	283,683	-1,595	0	0	3	1,439	40	-119	
8	1497.13	285,195	1,512	0	2,867	3	1,444	40	126	
9	1496.41	283,311	-1,884	0	0	3	1,493	40	-354	
10	1496.22	283,311	0	0	1,228	3	1,454	40	263	
11	1495.46	281,743	-1,568	0	0	3	1,485	40	-46	
12	1494.71	280,201	-1,542	0	0	3	1,476	40	-29	
13	1493.88	278,500	-1,701	0	0	3	1,622	40	-42	
14	1493.99	278,725	225	0	2,100	3	1,857	39	18	
15	1493.03	276,764	-1,961	0	0	3	1,875	39	-50	
16	1492.09	274,852	-1,912	0	0	3	1,927	40	52	
17	1492.27	275,218	366	0	2,263	3	1,971	0	71	
18	1491.37	273,434	-1,784	0	0	3	1,859	0	72	
19	1490.53	271,696	-1,738	0	0	3	1,711	0	-30	
20	1491.01	272,665	969	0	2,591	3	1,694	0	69	
21	1490.09	270,810	-1,855	0	0	3	1,843	0	-15	
22	1490.78	272,201	1,391	0	3,093	3	1,844	0	139	
23	1491.02	272,685	484	0	2,269	3	1,706	0	-82	
24	1491.44	273,535	850	0	2,596	3	1,807	0	58	
25	1491.26	273,171	-364	0	1,343	3	1,745	0	35	
26	1490.43	271,495	-1,676	0	0	4	1,687	0	7	
27	1490.92	272,483	988	0	2,652	4	1,773	0	105	
28	1491.68	274,021	1,538	0	3,522	4	1,864	0	-124	
29	1491.99	274,649	628	0	2,405	4	1,815	0	34	
30	1492.39	275,462	813	0	2,597	4	1,805	0	17	
31	1492.77	276,235	773	0	2,375	4	1,513	0	-93	
Total			-9,023	0	41,513	102	50,271	518	151	

**Table 28. Governor Edmund G. Brown California Aqueduct**

Southern Field Division, Monthly Deliveries (West Branch)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool		Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending				Entitle-ment	Rec.	Local	Purchase	CLWA T1	
	No.	Structure	Mile					Pool B		
29A	42	Oso Pumping Plant	1.49		51,518					
29F	W2	Quail Lake	5.02	Antelope Valley-East Kern Water Agency	Re-moved					
		Quail Lake Embankment	7.82	Antelope Valley-East Kern Water Agency	Stub					
		Warne Power Plant	14.07		50,944					
29H	W3	Pyramid Lake		Calif. State Park Pyramid Recreation	0					
		Pyramid Dam	17.10	Piru Creek Fish Enhancement	0					
29J	W4	Castaic Power Plant	25.82	( 81,547 AF pumpback )	118,605					
		Elderberry Forebay								
		Forebay Dam	28.12							
30 1/	W5	Castaic Lake		Calif. State Park Castaic Lake Recreation	33		33			
		Dam	31.47							
		Castaic Lake Outlet	31.55	MWD - 78"	0					
				MWD - 132"	49,757					
				MWD-Castaic Lake WA - T1	-2,165					
				Castaic Lake WA - T1	2,165					
				Castaic Lake WA	325					
				United Water Conservation Dist.	0					
				MWD - Ventura County FCD	156					
				LA Co. Parks & Recreation	0					
				Releases to Lagoon	518					
				Reach 30 Subtotal:	50,271	50,238	33	0	0	
	W6	Castaic Lagoon		Recreation to Lagoon	593		593			
		Outlet	31.87		178					

1/ Reach 30 actually terminates at mile 31.50. It is shown here as including the outlet works at mile 31.55.

All deliveries from the outlet works and from the Lagoon are billed to Reach 30.

**Table 29. Silverwood Lake**

Daily Operation

(in acre-feet except as noted)

Capacity: 74,970 ac-ft

**December 1999**

Date	Water Surface Elev. (in feet)	Storage	Storage Change	Inflow			Outflow				Computed Losses (-) Gains (+)	Las Flores Ranch Exchange 1/
				Mojave Siphon Power-plant	Mojave Bypass Flume	Natural Stream Inflow	Project		Del. To Mojave W.A.	Natural To Mojave River		
							Delivered to CLAWA	Rec.	San Bernardino Tunnel			
Nov 30	3328.29	51,316										
1	3328.45	51,444	128	1,793	0	0	3	0	1,547	0	1	-114
2	3328.18	51,229	-215	1,604	0	0	3	0	1,390	0	0	-426
3	3328.44	51,436	207	2,010	0	0	4	0	1,833	0	0	34
4	3328.26	51,292	-144	1,845	0	0	5	0	1,993	0	1	10
5	3328.36	51,372	80	1,663	0	0	3	0	1,617	0	0	37
6	3328.28	51,308	-64	1,628	0	0	4	0	1,643	0	0	-45
7	3327.48	50,673	-635	1,448	0	0	4	0	2,035	0	1	-43
8	3330.15	52,808	2,135	3,940	29	0	0	0	1,723	0	0	-111
9	3332.48	54,709	1,901	4,018	0	0	1	0	2,090	0	0	-26
10	3335.07	56,870	2,161	3,996	0	0	0	0	1,709	0	1	-125
11	3338.27	59,598	2,728	3,992	0	0	10	1	1,309	0	0	56
12	3341.13	62,093	2,495	3,988	0	0	4	0	1,423	0	0	-66
13	3343.57	64,264	2,171	3,972	0	0	3	0	1,707	0	1	-90
14	3345.34	65,863	1,599	4,008	0	0	1	0	1,720	0	0	-688
15	3347.65	67,983	2,120	3,712	0	1	0	0	1,464	0	0	-129
16	3349.00	69,238	1,255	2,865	0	1	2	0	1,562	0	1	-46
17	3349.04	69,276	38	1,447	0	1	3	0	1,456	0	0	49
18	3349.35	69,566	290	1,909	0	1	3	0	1,539	0	0	-78
19	3349.05	69,285	-281	1,366	0	1	3	0	1,424	0	1	-220
20	3348.95	69,192	-93	1,386	0	1	3	0	1,466	0	0	-11
21	3348.85	69,098	-94	1,421	0	1	3	0	1,551	0	0	38
22	3349.56	69,763	665	2,219	0	1	3	0	1,508	0	1	-43
23	3349.65	69,847	84	2,049	0	1	3	0	1,976	0	0	13
24	3349.36	69,575	-272	1,550	0	1	4	0	1,928	0	0	109
25	3349.16	69,388	-187	1,836	0	1	2	0	2,013	0	1	-8
26	3349.16	69,388	0	2,082	0	1	2	0	1,974	0	0	-107
27	3349.25	69,472	84	1,979	0	1	2	0	1,925	0	0	31
28	3348.96	69,201	-271	1,834	0	1	1	0	2,181	0	0	76
29	3348.86	69,108	-93	1,996	0	1	4	0	2,114	0	0	28
30	3349.17	69,397	289	2,503	0	1	6	0	2,187	0	0	-22
31	3349.07	69,304	-93	2,017	0	1	3	0	2,171	0	0	63
<b>Total</b>				17,988	74,076	29	13	92	1	54,178	0	9
												-1,850
												0

1/ Project water delivered from Mojave Siphon in exchange for like amount of Natural Streamflow.

**Table 30. Lake Perris**

Daily Operation

(in acre-feet except as noted)

Capacity: 131,452 ac-ft

**December 1999**

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow 1/	Outflow 2/	Computed Losses (-) Gains (+) 1/
Nov 30	1585.16	120,394				
1	1585.16	120,394	0		10	
2	1585.17	120,417	23		10	
3	1585.13	120,327	-90		12	
4	1585.10	120,260	-67		12	
5	1585.08	120,215	-45		12	
6	1585.05	120,147	-68		13	
7	1585.05	120,147	0		14	
8	1585.02	120,080	-67		14	
9	1585.01	120,058	-22		13	
10	1584.98	119,990	-68		13	
11	1584.97	119,968	-22		13	
12	1585.01	120,058	90		14	
13	1585.00	120,035	-23		13	
14	1585.01	120,058	23		13	
15	1584.98	119,990	-68		14	
16	1584.99	120,013	23		13	
17	1584.97	119,968	-45		14	
18	1584.97	119,968	0		13	
19	1584.96	119,945	-23		13	
20	1584.94	119,901	-44		13	
21	1584.93	119,878	-23		13	
22	1584.95	119,923	45		46	
23	1584.98	119,990	67		10	
24	1587.97	119,968	-22		12	
25	1584.95	119,923	-45		13	
26	1584.93	119,878	-45		13	
27	1584.92	119,856	-22		13	
28	1584.90	119,811	-45		13	
29	1584.88	119,766	-45		13	
30	1584.88	119,766	0		13	
31	1584.91	119,833	67		13	
<b>Total</b>			<b>-561</b>	<b>292</b>	<b>428</b>	<b>-425</b>

1/ Readings are not taken on a daily basis. End of month only.

2/ Includes deliveries to MWD from Reach 28J and recreation water to California State Park at lake Perris.

**Table 31a. Governor Edmund G. Brown California Aqueduct**

Southern Field Division, Monthly Deliveries (East Branch)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries						
	Beginning and Ending					Entitle-ment	Rec.	Transfer	Purchase	Transfer		
	No.	Structure	Mile						Pool B	Local Out		
17E	40	Edmonston Pumping Plant	293.45		122,472							
	41		298.65	Kern County Water Agency Tej.-Cas	Stub							
17F		Check No. 41	303.41									
18A	42	Check No. 42	304.99									
19		Alamo Powerplant	305.73	(Does not include 25,693 AF flow down Cottonwood Chute)	54,389	2	694	72	0	0		
			308.05	Antelope Valley-East Kern WA	0							
	43	Check No. 43	309.70									
	44		311.84	LADWP Connection	0							
			313.50	AVEK 245th Street West	0							
	45	Check No. 44	314.81									
			314.93	AVEK 235th Street West	2							
			315.57	AVEK 225th Street West	0							
	46	Check No. 45	319.74									
			323.19	Antelope Valley-East Kern WA Fairmont	766							
		Check No. 46	323.84									
				Reach 19 Total:	768							
20A	47	Check No. 47	326.77			41	1,789	633	0	0		
	48		326.91	Antelope Valley-East Kern WA Willow Springs Siphon	41							
			329.65	Antelope Valley-East Kern WA 120th Street West	Removed							
		Check No. 48	330.82									
	49	Check No. 49	335.93									
	50		336.73	AVEK WA - Quartz Hill (Wheeled for Palmdale WD)	0							
				Antelope Valley-East Kern WA	1,789							
20B		Check No. 50	341.51			633	272	0	0	0		
	51	Check No. 51	342.07									
	52		342.80	Antelope Valley-East Kern WA 30th Street West	Not in Use							
		Check No. 52	343.74									
	53		346.98	PWD Palmdale	633							
			348.14	Antelope Valley-East Kern WA Acton Treatment Plant	0							
21		Check No. 53	348.17			272	0	0	0	0		
	54	Check No. 54	350.25									
	55	Check No. 55	352.70									
	56	Check No. 56	354.76									
			354.97	Littlerock Creek I.D.	0							
22A	57	Check No. 57	356.93			272	0	0	0	0		
	58		357.60	Antelope Valley-East Kern WA	0							
			357.72	96th Street East	0							
			359.76	Antelope Valley-East Kern WA	272							
			359.82	East Side Treatment Plant	0							

**Table 31b. Governor Edmund G. Brown California Aqueduct**

Southern Field Division, Monthly Deliveries (East Branch, Continued)

(In acre-feet)

**December 1999**

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries					
	Beginning and Ending		Structure			Entitlement	Recreation	Ex-change	Purchase Pool B	Local	
	No.	Structure	Mile								
22B	58	Pearblossom Pumping Plant	360.61		73,127	425	950	1			
	59	Check No. 59	366.09								
	60	Check No. 60	373.94								
	61	Check No. 61	379.00								
	62	Check No. 62	384.26								
	63	Check No. 63	389.20	Mojave Water Agency Mojave River	1,375						
	64	Check No. 64	395.10								
	65	Check No. 65	400.32								
	66		401.10	Mojave Water Agency Morongo 24" and 42"	955						
				Mojave Water Agency Hesperia	0						
23	Check No. 66	403.41				92	1				
	Mojave Siphon	405.48		Las Flores Ranch	0						
24	Mojave Siphon Powerplant	405.65		(Does not include 29 AF of bypass at Mojave Flume)	74,076						
	67	Silverwood Lake	407.65	Crestline Lake Arrowhead Water Agency	92						
				Calif. State Park Silverwood Agency (Rec.)	1						
25	San Bernardino Tunnel	411.46			69,780	17,043	2,858				
				San Gorgonio Pass Water Agency	0						
26A	Devil Canyon Powerplant	412.73			69,780						
	68	Devil Canyon Afterbay Control Structures	412.88	MWD-SC Rialto	17,043						
				Desert Water Agency (MWD Wheeling Exchange)	6,299						
				San Gabriel Valley Water District	3,236						
				Coachella Valley WD (MWD Wheeling Exchange)	5,996						
				San Bernardino Valley Metropolitan Water District	1,342						
				MWD (SBVMWD Exchange)	0						
28G	69	Santa Ana Valley Pipeline	425.46			4,592	319				
28H			433.06	MWD-SC Box Springs	4,592						
			440.05	MWD-SC Perris Bypass Pipeline	15,220						
28J			442.00	MWD-SC 18"	319						
	Lake Perris		443.44	MWD-SC 54"	63						
				MWD-SC 78"	16						
				Calif. State Park Lake Perris Recreation	30						
				MWD Total:	97,296						
						90,529	0	0	6,767	0	

**Table 32. Water Quality At Selected SWP Locations**

December 1999

Constituent	Units	Thermalito Afterbay At Outlet	North Bay Aqueduct Barker Slough Pumping Plant	Banks Pumping Plant	Delta Mendota Canal At McCabe Rd.	California Aqueduct				Devil Canyon Afterbay Near San Bernardino
						O'Neill Forebay Outlet (Check 13)	Kettleman City (Check 21)	Near Hwy 119 (Check 29)	Tehachapi Afterbay (Check 41)	
Alkalinity	mg/l	40	88	76	73	75	74	75	76	75
Arsenic	mg/l	<0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Boron	mg/l	<0.10	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1
Bromide	mg/l	<0.01	0.04	0.52	0.42	0.34	0.35	0.28	0.27	0.23
Calcium	mg/l	8	14	19	19	19	18	18	19	18
Carbon - Total Organic	mg/l	NR	3	3	3	3	3	NR	3	2
Chloride	mg/l	1	15	151	122	98	102	80	79	71
Chromium	mg/l	<0.005	0.008	0.006	0.006	0.007	0.007	0.006	0.006	0.006
Copper	mg/l	<0.001	0.002	0.003	0.003	0.003	0.002	0.002	0.002	0.003
Fluoride	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hardness	mg/l	32	76	113	109	105	98	94	97	90
Iron	mg/l	<0.005	<0.005	0.021	0.046	0.024	0.084	0.016	0.017	<0.005
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/l	3	10	16	15	14	13	12	12	11
Manganese	mg/l	<0.005	0.008	0.016	<0.005	0.006	<0.005	<0.005	<0.005	<0.005
Nitrate + Nitrite	mg/l	<0.01	0.44	0.67	NR	NR	NR	NR	0.86	0.57
Phosphorus-Ortho	mg/l	<0.01	0.07	0.06	NR	NR	NR	NR	0.06	0.07
Phosphorus-Total	mg/l	0.01	0.10	0.08	NR	NR	NR	NR	0.08	0.09
Selenium	mg/l	<0.001	<0.001	0.002	0.001	0.001	0.001	0.001	0.001	<0.001
Sodium	mg/l	4	19	91	78	67	69	58	58	51
Specific Conductance	µS/cm	94	268	725	641	560	573	500	511	460
Sulfate	mg/l	1	17	38	22	38	34	36	38	29
Total Dissolved Solids	mg/l	48	138	388	332	290	304	291	266	241
Trihalomethane	µg/l	NR	514	553	486	401	429	412	455	369
Formation Potential	NTU	2	22	3	3	5	7	4	5	3
Turbidity	NTU	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.005
Zinc	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		

mg/l milligrams per liter

µg/l micrograms per liter

µS/cm microSiemens per centimeter

NR - Not Reported

NTU - nephelometric turbidity units

**Table 33. Water Quality At Selected Delta Stations**

December 1999

Date	Tides (feet above mean sea level)		Flow In CFS			Electrical Conductivity in milliSiemens/crr									Cl in mg/l
	(Antioch) Daily Mean		Net Delta Outflow Index	Rio Vista	Antioch	Emmaton		Jersey Point		Clifton Court	Cache Slough	Delta Mendota Canal	Contra Costa Canal Intake		
	Mean Daily	Monthly Average				md	md	md	14dm						
	Hi	Half				md	md	md	14dm	md	14dm	md	md	md	md
1	2.20	0.39	6,792	6,792	12,902	4.29	0.00	0.66	1.11	1.76	1.48	0.50	0.81	0.58	198
2	2.34	0.35	7,961	7,376	13,975	4.11	8.12	0.68	1.09	1.81	1.52	0.56	0.80	0.58	203
3	2.29	0.22	9,026	7,926	15,639	3.76	6.88	0.42	1.03	1.76	1.54	0.77	0.79	0.58	208
4	2.41	0.32	10,913	8,673	15,396	3.59	6.95	0.49	0.96	1.80	1.57	1.02	0.76	0.61	200
5	2.56	0.44	10,592	9,057	14,858	3.58	6.98	0.54	0.92	1.85	1.61	1.44	0.74	0.61	220
6	2.79	0.63	7,650	8,822	14,096	3.62	7.51	0.64	0.89	1.93	1.66	1.80	0.73	0.63	231
7	2.83	0.76	7,130	8,581	13,825	3.64	8.02	0.65	0.85	1.97	1.70	1.46	0.74	0.62	230
8	2.70	0.60	6,787	8,356	13,565	3.11	6.82	0.59	0.81	1.88	1.74	0.51	0.76	0.64	184
9	2.87	0.80	6,476	8,148	13,282	3.48	6.98	0.77	0.78	1.97	1.78	0.51	0.74	0.65	170
10	2.82	0.80	12,921	8,625	13,817	3.41	7.00	0.56	0.72	1.88	1.81	0.51	0.76	0.70	175
11	2.49	0.68	14,090	9,122	14,456	3.04	5.85	0.57	0.68	1.68	1.81	0.91	0.77	0.66	185
12	2.35	0.64	14,833	9,598	14,588	2.59	5.13	0.56	0.65	1.59	1.81	0.92	0.74	0.74	190
13	1.91	0.62	17,950	10,240	14,516	2.45	4.79	0.43	0.61	1.43	1.80	0.91	0.77	0.76	198
14	1.55	0.27	17,471	10,757	14,478	1.90	3.87	0.35	0.57	1.27	1.76	0.97	0.77	0.76	225
15	1.58	0.06	16,251	11,123	14,165	1.70	3.55	0.35	0.54	1.19	1.72	0.96	0.78	0.82	203
16	1.77	0.01	16,255	11,444	9,828	1.52	3.62	0.34	0.52	1.09	1.66	0.89	0.79	0.80	215
17	2.15	0.13	15,984	11,711	9,546	1.45	3.74	0.38	0.52	1.01	1.61	0.91	0.80	0.73	228
18	2.38	0.18	15,655	11,930	9,239	1.46	4.01	0.38	0.51	0.94	1.55	0.91	0.79	0.66	195
19	2.70	0.35	15,193	12,102	9,034	1.47	4.13	0.40	0.50	0.87	1.48	0.91	0.79	0.65	240
20	2.88	0.46	14,422	12,218	8,740	1.44	4.38	0.43	0.48	0.81	1.40	0.91	0.78	0.67	258
21	3.28	0.72	12,951	12,253	8,408	1.55	4.91	0.47	0.47	0.78	1.31	0.90	0.75	0.78	240
22	3.31	0.76	11,543	12,220	8,380	1.59	5.29	0.50	0.46	0.74	1.23	0.89	0.74	0.78	248
23	3.20	0.69	10,537	12,147	8,302	1.35	5.13	0.49	0.44	0.69	1.14	0.89	0.74	0.73	240
24	2.97	0.57	9,110	12,021	8,325	1.37	4.70	0.47	0.43	0.64	1.05	0.88	0.76	0.70	240
25	2.79	0.49	8,523	11,881	8,314	1.33	4.66	0.46	0.42	0.60	0.98	0.85	0.75	0.68	240
26	2.53	0.54	7,525	11,713	8,289	1.34	4.66	0.44	0.42	0.58	0.90	0.79	0.75	0.62	248
27	2.00	0.42	7,529	11,558	8,416	1.25	4.34	0.38	0.41	0.55	0.84	0.80	0.77	0.61	235
28	1.93	0.32	7,064	11,398	8,298	1.15	4.22	0.35	0.41	0.53	0.79	0.80	0.78	0.63	235
29	2.13	0.27	6,122	11,216	8,100	1.19	4.20	0.33	0.41	0.52	0.74	0.69	0.80	0.61	220
30	2.30	0.32	5,822	11,036	7,959	1.30	4.85	0.34	0.41	0.52	0.70	0.62	0.80	0.59	203
31	2.67	0.57	4,059	10,811	7,735	1.50	5.75	0.38	0.41	0.57	0.67	0.50	0.80	0.56	200

Clifton Court Cl(mg/l)=200X EC - 25

N.R. = No Record.

N.C. = Not computed due to insufficient data.

e = Estimated

dm = Daily Mean

md = Mean Daily

f = Excess Delta conditions with fish concerns.

r = Excess delta conditions with export/inflow ratio concerns.

s = Balanced water conditions with storage withdrawals.

**Table 34. Pesticides, Herbicides, and Other Organic Substances Detected In the SWP**

**December 1999**

Sampling Location	Sample Date	Chemical Detected	Concentration µg/l
	1/		2/
North Bay Aqueduct At Barker Slough Pumping Plant	September 15, 1999	None Detected	- - -
California Aqueduct At Banks Pumping Plant	September 15, 1999	MTBE	1.0
Delta Mendota Canal At McCabe Road	September 15, 1999	None Detected	- - -
California Aqueduct Near Kettleman City (Check 21)	September 15, 1999	None Detected	- - -
California Aqueduct At Tehachapi Afterbay (Check 41)	September 15, 1999	None Detected	- - -
Devil Canyon Power Plant At Entrance To Santa Ana Pipeline	September 15, 1999	MTBE	2.4

1/ Locations are normally sampled during March, June, and September. Monthly reports will include data for the month in which samples were most recently taken.

2/ Micrograms per liter.

**Table 35. Oroville and Delta Field Divisions Energy Data**

(in kWh)

**December 1999**

Date	Oroville Thermalito Complex		Barker Slough Pumping Plant Load	Cordelia Pumping Plant Load	Banks Pumping Plant		South Bay Pumping Plant Load	Del Valle Pumping Plant Load
					Total Load	SWP Load		
	Generation	Load						
1	5,973,120	864	19,824	35,385	3,346,752	3,346,752	231,340	241
2	5,584,320	6,048	20,510	35,378	3,619,200	3,619,200	201,565	257
3	6,243,264	2,880	20,503	34,076	3,045,696	3,045,696	255,940	252
4	3,568,032	3,168	19,425	31,122	3,052,608	3,052,608	282,225	229
5	965,952	6,624	20,041	31,115	3,039,936	3,039,936	293,530	223
6	5,299,488	4,608	21,959	34,797	3,858,240	3,858,240	297,395	232
7	5,212,224	5,760	20,811	31,899	3,642,048	3,642,048	307,880	230
8	5,521,824	843,840	26,299	28,392	3,632,256	3,632,256	296,440	237
9	5,167,872	1,495,008	28,756	31,612	3,532,608	3,532,608	347,620	3,417
10	4,940,928	1,545,120	26,523	28,819	1,829,568	1,829,568	412,635	7,021
11	5,598,144	1,994,112	25,627	29,841	1,816,128	1,816,128	414,920	10,497
12	241,632	2,299,104	24,654	29,855	1,857,024	1,857,024	422,860	11,710
13	7,086,240	864	26,733	33,677	1,409,472	1,409,472	431,820	10,053
14	5,405,472	3,744	24,255	28,231	458,496	458,496	292,810	4,437
15	4,016,448	0	27,783	31,486	403,008	403,008	173,370	489
16	4,133,088	0	27,104	30,877	465,216	465,216	132,795	6,604
17	2,503,008	0	28,042	30,170	443,328	443,328	417,100	12,499
18	4,802,976	0	30,821	34,622	444,672	444,672	446,970	12,292
19	1,264,320	0	32,151	35,511	446,592	446,592	452,145	12,417
20	5,913,792	0	29,330	33,607	734,016	734,016	374,700	7,563
21	5,848,416	0	31,556	38,507	1,290,048	1,290,048	271,690	216
22	7,478,784	0	26,446	30,457	1,815,936	1,815,936	292,280	244
23	8,596,224	288	25,235	37,576	2,335,872	2,335,872	297,830	233
24	7,986,528	0	21,364	39,956	1,660,800	1,660,800	307,200	225
25	3,384,864	0	23,282	38,857	1,693,440	1,693,440	307,895	223
26	1,575,072	288	23,205	38,780	2,235,072	2,235,072	290,540	229
27	7,614,720	0	23,114	38,773	2,189,184	2,189,184	299,010	230
28	7,047,936	0	24,003	37,590	2,515,392	2,515,392	294,955	229
29	9,505,728	0	17,878	24,283	3,070,848	3,070,848	293,000	235
30	9,160,416	0	18,326	27,370	3,630,720	3,630,720	262,255	232
31	4,834,368	576	14,875	22,799	3,797,376	3,797,376	143,275	350
Total	162,475,200	8,212,896	750,435	1,015,420	67,311,552	67,311,552	9,545,990	103,546

**Table 36. San Luis Field Division Energy Data**

(in kWh)

**December 1999**

Date	Dos Amigos Pumping Plant		Gianelli Pumping-Generating Plant			
	Total Load	SWP Load 1/	Total Generation	SWP Generation 1/	Total Load	SWP Load 1/
1	855,072	783,072	0	0	2,529,504	1,269,504
2	885,312	777,312	0	0	3,782,592	1,612,592
3	924,768	816,768	0	0	3,780,000	1,695,000
4	739,584	631,584	0	0	2,440,224	1,048,224
5	965,376	845,376	0	0	5,940,864	1,332,864
6	894,672	786,672	0	0	1,949,472	653,472
7	917,424	809,424	0	0	3,429,216	1,893,216
8	1,010,592	902,592	0	0	3,501,792	1,380,792
9	1,081,296	856,296	0	0	3,548,160	2,252,160
10	1,139,328	914,328	0	0	1,132,416	25,416
11	1,096,272	871,272	0	0	18,720	18,720
12	1,168,416	808,416	0	0	19,008	19,008
13	1,147,536	922,536	60,768	60,768	19,296	19,296
14	1,102,176	877,176	1,108,224	1,108,224	14,112	14,112
15	1,180,368	955,368	2,130,624	1,680,624	8,064	8,064
16	1,194,912	969,912	1,312,704	862,704	8,352	8,352
17	955,440	730,440	1,117,728	1,117,728	9,792	9,792
18	890,928	665,928	1,258,560	808,560	8,064	8,064
19	980,496	620,496	483,264	483,264	13,536	13,536
20	637,344	412,344	786,816	336,816	8,064	8,064
21	576,432	351,432	442,944	-7,056	8,352	8,352
22	887,328	662,328	347,328	-12,672	10,656	10,656
23	886,320	661,320	0	0	21,312	21,312
24	996,768	771,768	0	0	19,872	19,872
25	724,464	508,464	0	0	2,647,584	343,584
26	827,424	611,424	0	0	3,182,400	878,400
27	911,520	686,520	0	0	1,259,712	299,712
28	886,464	661,464	0	0	1,841,472	545,472
29	840,816	840,816	1,199,520	1,199,520	5,115,456	3,387,456
30	978,480	978,480	927,648	927,648	4,753,728	3,361,728
31	890,640	890,640	836,640	836,640	4,742,784	3,206,784
Total	29,173,968	23,581,968	12,012,768	9,402,768	55,764,576	25,373,576

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping; adjustments to SWP water shares are made to balance the mismatch.

**Table 37. San Joaquin Field Division Pumping Plant Energy Load Data**

(in kWh)

December 1999

Date	Coastal Branch					California Aqueduct			
	Las Perillas	Badger Hill	Devils Den	Bluestone	Polonio	Buena Vista	Teerink	Chrisman	Edmonston
1	6,800	17,176	33,786	30,726	33,588	812,592	909,072	2,110,464	7,583,040
2	5,916	14,376	33,858	31,914	34,956	711,432	785,592	1,816,704	6,607,440
3	10,302	27,888	38,934	37,476	39,834	844,704	924,480	2,168,928	7,601,760
4	12,812	35,048	39,186	35,388	38,826	939,024	986,544	2,324,448	8,382,240
5	11,682	30,072	33,786	32,004	34,542	913,608	1,027,080	2,384,064	8,493,840
6	9,528	25,360	33,804	31,896	34,740	853,056	944,712	2,256,192	8,048,880
7	9,172	23,080	33,804	31,860	34,560	774,288	819,216	1,947,744	6,978,960
8	4,544	10,752	27,216	26,640	29,124	1,209,960	1,358,712	3,167,136	11,681,280
9	8,090	20,416	39,456	36,468	39,312	1,215,504	1,329,048	3,106,368	10,967,760
10	6,308	16,296	36,972	35,676	39,096	1,222,128	1,334,448	3,109,536	11,148,480
11	7,450	18,184	31,176	29,070	32,202	1,257,552	1,350,072	3,165,984	11,458,080
12	3,834	9,008	24,930	22,824	23,922	1,207,872	1,361,952	3,171,168	11,409,120
13	4,950	12,392	33,606	31,392	34,578	1,208,376	1,365,768	3,166,272	11,517,120
14	5,842	13,312	33,642	31,932	34,560	1,241,208	1,342,584	3,167,712	11,386,800
15	5,052	11,712	29,736	27,270	30,060	1,117,512	1,178,424	2,750,400	9,701,280
16	11,008	24,136	40,590	37,980	41,220	921,168	971,640	2,208,672	7,998,480
17	16,552	37,840	33,822	31,608	34,830	582,048	620,640	1,461,312	5,334,480
18	16,278	37,960	36,522	34,866	37,404	692,496	722,088	1,665,792	5,821,920
19	10,228	23,160	41,994	38,916	42,174	736,344	803,160	1,889,568	6,870,240
20	12,304	27,456	34,578	33,084	35,820	473,112	540,288	1,262,592	4,491,360
21	12,430	28,776	36,432	33,966	37,062	479,736	529,920	1,221,696	4,485,600
22	15,058	35,064	44,694	45,108	48,330	952,632	999,216	2,328,480	8,363,520
23	15,682	35,056	52,794	48,726	52,902	910,224	953,856	2,227,392	7,833,600
24	5,470	13,184	34,992	31,986	34,542	1,212,480	1,311,696	3,020,256	10,913,040
25	5,016	10,400	35,334	33,246	36,486	1,162,224	1,345,824	3,120,480	11,217,600
26	9,458	21,432	40,320	37,134	40,032	1,214,784	1,354,320	3,166,848	11,277,360
27	11,660	26,448	29,394	28,746	30,798	1,099,224	1,183,752	2,750,400	9,830,160
28	15,282	34,304	46,944	43,020	46,692	1,072,440	1,193,400	2,794,752	9,890,640
29	13,328	30,232	48,060	46,458	49,716	1,122,912	1,271,088	2,948,256	10,604,880
30	16,862	40,104	49,158	45,216	49,212	1,262,088	1,334,232	3,114,720	11,155,680
31	19,952	48,560	51,084	48,726	52,452	1,076,112	1,126,944	2,573,280	9,069,120
Total	318,850	759,184	1,160,604	1,091,322	1,183,572	30,498,840	33,279,768	77,567,616	278,123,760

**Table 38. Southern Field Division Energy Data**

(in kWh)

**December 1999**

Date	West Branch			East Branch			
	Oso Pumping Plant Load	Warne Powerplant Generation	Castaic Powerplant SWP Generation	Alamo Powerplant Generation	Pearblossom Pumping Plant Load	Devil Canyon Powerplant Generation	Mojave Siphon Powerplant Generation
1	402,080	926,496	1,440,000	222,096	1,163,916	1,773,216	182,616
2	374,864	930,672	1,440,000	193,368	1,096,140	1,605,792	155,337
3	336,336	905,616	1,440,000	256,928	1,423,020	2,157,408	200,025
4	424,760	950,616	1,440,000	257,880	1,383,744	2,415,936	192,150
5	361,312	218,016	1,440,000	299,376	1,096,392	1,986,240	170,478
6	444,472	941,112	1,560,000	229,040	983,028	2,001,504	156,828
7	331,968	863,568	1,560,000	229,796	1,214,496	2,436,480	129,822
8	272,216	578,232	720,000	431,312	2,674,476	2,045,856	398,013
9	188,160	561,960	720,000	434,532	2,681,292	2,510,592	390,390
10	206,304	570,312	720,000	433,916	2,682,984	2,060,928	378,021
11	243,880	619,488	720,000	434,336	2,681,976	1,587,264	368,760
12	236,096	275,832	720,000	435,316	2,681,688	1,710,144	355,383
13	250,656	592,704	720,000	436,072	2,682,312	2,046,432	344,085
14	236,880	532,152	720,000	433,944	2,755,320	2,052,480	331,128
15	171,248	479,520	720,000	406,504	2,506,920	1,764,288	303,156
16	207,368	610,344	720,000	315,532	1,902,924	1,883,232	227,094
17	209,496	608,832	720,000	172,984	1,046,052	1,768,704	117,243
18	185,864	558,144	720,000	225,540	1,300,560	1,867,488	155,568
19	257,488	0	720,000	30,268	987,876	1,709,856	108,024
20	174,608	298,584	1,440,000	0	1,086,228	1,787,040	106,113
21	101,024	317,232	1,440,000	0	1,026,516	1,876,896	106,449
22	330,400	678,240	1,440,000	0	1,413,552	1,844,160	178,248
23	397,768	912,312	1,440,000	0	1,367,496	2,351,904	164,976
24	768,488	1,737,792	2,832,000	0	1,240,128	2,333,088	124,341
25	725,256	1,698,840	2,832,000	0	1,300,032	2,409,216	150,108
26	767,648	1,545,048	2,856,000	0	1,344,120	2,414,976	165,732
27	628,320	1,354,680	2,280,000	0	1,312,704	2,321,568	153,888
28	630,168	1,367,496	2,280,000	0	1,312,992	2,569,632	141,141
29	620,648	1,626,120	2,280,000	104,832	1,614,300	2,473,248	158,277
30	624,848	1,637,856	2,280,000	314,272	1,589,508	2,532,192	193,263
31	567,952	1,013,976	2,280,000	240,772	1,293,864	2,580,960	154,098
Total	11,678,576	25,911,792	44,640,000	6,538,616	50,846,556	64,878,720	6,460,755